

BEFORE THE NEBRASKA PUBLIC SERVICE COMMISSION

IN THE MATTER OF THE NEBRASKA PUBLIC SERVICE COMMISSION, ON ITS OWN MOTION, SEEKING TO DETERMINE ACCESS COSTS FOR U S WEST (N/K/A QWEST CORPORTION APPLICATION NO. NUSF-17

COMES NOW Qwest Corporation, and hereby provides the Nebraska Public Service Commission with the attached for filing in the above-captioned matter:

- 1. Direct Testimony of Scott A. McIntyre with attachments;
- 2. Declaration of William P. Rogerson with attachments;
- 3. Direct Testimony of Jeffrey H. Rohlfs with Exhibits; and
- 4. Qwest's Amended Transition Plan.

Respectfully submitted on 7th day of June, 2002.

QWEST CORPORATION

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CERTIFICATE OF SERVICE

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BEFORE THE NEBRASKA PUBLIC SERVICE COMMISSION

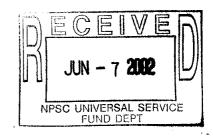
IN THE MATTER OF THE COMMISSION,)	
ON ITS OWN MOTION, SEEKING TO)	APPLICATION No. NUSF-17
DETERMINE ACCESS COSTS FOR)	
U S WEST (n/k/a QWEST CORPORATION))	

DIRECT TESTIMONY

SCOTT A. MCINTYRE

DIRECTOR - PRODUCT AND MARKET ISSUES

QWEST CORPORATION



JUNE 7, 2002

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I. EXECUTIVE SUMMARY

This testimony is in response to the Nebraska Public Service Commission's Order issued May 17, 2002, to determine whether the implementation of the Transition Plan filed in this proceeding would constitute the removal of Qwest's implicit subsidies from its switched access charges pursuant to the Commission's decision in C-1628. Qwest appreciates the continued opportunity to provide the Commission with its position on these very important and complex issues.

In its April 30, 2002 Transition Plan filing, Qwest proposed to further restructure switched access by reducing intrastate switched access an additional \$6.1 million on a revenue neutral basis through a proportionate offset from the Nebraska Universal Service Fund (NUSF). While that is still a workable plan, Qwest is offering with this testimony, a modified proposal that includes a different restructure mechanism that is more economically sound on a long-term basis. This new mechanism will accomplish the switched access restructure goals of the plan while adding a layer of long-term economic health to the underlying rate structure in Nebraska.

II. BACKGROUND

The Commission opened docket C-1628 on September 15, 1997 to investigate the structure of intrastate switched access charges and to establish a Nebraska Universal Service Fund (NUSF). In its January 13, 1999 Order, the Commission concluded that, where necessary, implicit subsidies should be replaced with explicit support from the NUSF to

ensure that all Nebraskans, without regard to location, have comparable 1 accessibility to telecommunications services at affordable prices. 2 3 In support of the Commission's overall objectives and direction in this 4 docket, as well as docket C-1628, Qwest has removed the clearly 5 identifiable subsidies that had in the past been collected through switched 6 access charges. (See Qwest's Comments filed December 2, 1999 in 7 NUSF-17 and Qwest Witness Lanphier Testimony filed December 15, 8 9 2000 in C-1628). Qwest restructured its switched access local transport 10 charges to bring the Nebraska transport charge structure into consistency with the interstate structure. The transport restructure was accomplished 11 in two steps, on March 18 and September 1, 1999. While performing the 12 transport restructure, roughly \$10 million in contribution was removed 13 from the transport charges and added to the common line (CCL) charges. 14 On September 1, 1999, Qwest completely eliminated its CCL charges, thus 15 reducing its intrastate switched access charges by over \$21.6 million. 16 Accordingly, Qwest has eliminated the clear source of implicit subsidy in 17 its intrastate switched access rates. 18

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1		III. INTRODUCTION OF WITNESS
2		
3	Q.	PLEASE STATE YOUR NAME, TITLE AND ADDRESS.
4	A.	My name is Scott A. McIntyre. I am employed by Qwest Corporation (Qwest) as
5		Director - Product and Market Issues. My business address is Room 3009, 1600 7 th
6		Avenue, Seattle, WA, 98191.
7		
8	Q.	PLEASE REVIEW YOUR EDUCATION, WORK EXPERIENCE, AND
9		PRESENT RESPONSIBILITIES.
10	A.	I earned a Bachelor of Science degree in Electrical Engineering at the University of
11		Washington in 1974. I have worked for Qwest (formerly U S WEST
12		Communications, Inc. and before that, Pacific Northwest Bell) since 1970. In the past
13		32 years, I have held many positions that have given me a broad understanding of the
14		telecommunications business. I have experience in the installation and repair of local
15		residence and business telephone services. I also have experience in analyzing and
16		planning new central office equipment and interoffice network facilities. I have
17		performed cost analyses on many aspects of the business and analyzed departmental
18		budgets in great detail. From 1987 to 1999, I managed private line voice and data
19		products. This included the development, pricing and marketing for a wide range of
20		products serving business customers across Qwest's fourteen-state region.
21		
22		Since July 1999, I have been in my current position as a policy and pricing expert,
23		representing Qwest on issues involving various services. I also represent Qwest on
24		issues concerning competition and performance measures. This wide range of
25		experience has provided me with an understanding of how services are provided, the
26		pricing and marketing that support these services and the impacts of regulation and
27		competition.
28		
29	Q.	HAVE YOU PREVIOUSLY TESTIFIED IN NEBRASKA OR OTHER
30		STATES IN QWEST'S TERRITORY?

A. Yes. Last year I testified in Application No. C-2112, the Nebraska Public Service 1 Commission (Commission) investigation into payhone issues. More recently I 2 testified earlier this year in support of Owest's Local Service Freeze offering. I have 3 also testified on several different occasions in Oregon, Washington, Colorado, 4 Arizona, New Mexico, Utah, Wyoming, Iowa, and Minnesota. 5 6 7 **PURPOSE OF TESTIMONY** 8 9 WHAT IS THE PURPOSE OF YOUR TESTIMONY? 10 Q. The purpose of my testimony is to explain Qwest's proposal in response to the 11 A. Commission's Order issued May 17, 2002. I will explain Qwest's Transition Plan 12 filed April 30, 2002 and propose an adjustment to the plan that Qwest believes 13 promotes a healthier long-term rate structure. 14 15 Even though Owest has removed the clearly identifiable subsidies that had previously 16 been collected through intrastate switched access charges, Qwest believes that further 17 reductions in intrastate switched access rates are necessary in order to further the 18 Commission's stated goal of moving the state switched access charge structure toward 19 the interstate switched access structure and to further the overall policy goal of 20 establishing appropriate economic pricing. 21 22 In this testimony, I will describe how further switched access restructuring can be 23 accomplished on a revenue neutral basis though implementation of a competitively 24 neutral Intrastate Subscriber Line Charges (ISLC) for each residential and business 25 line, rather than through NUSF support, as previously proposed in our April, 2002 26 Transition Plan filing. 27 28

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V. POLICY GOALS SUPPORTING FURTHER SWITCHED ACCESS RESTRUCTURE

A.

Q. WHY IS FURTHER INTRASTATE SWITCHED ACCESS

RESTRUCTURING NECESSARY?

Beyond the removal of subsidies, reducing switched access charges will benefit the emerging competitive landscape of telecommunications. Qwest believes that restructuring switched access is one vital step toward the broader policy goal of establishing appropriate economic pricing, at both the federal and state levels, for retail products and services, intrastate and interstate switched access, unbundled network elements and interconnection. Appropriate economic pricing promotes capital investment and drives market behavior that enhances competition, ultimately benefiting consumers.

As Qwest made clear in its intercarrier compensation comments currently pending before the Federal Communications Commission (FCC)¹, the public policy goal for intercarrier compensation, including switched access, should be a simple, predictable, and market-oriented regime that applies to any hand-off of traffic on the public switched network. To that end, Qwest proposes a unified bill-and-keep regime for intercarrier compensation, under which each carrier would recover from its end users the costs of its own access facilities, including the costs of its loops and of the terminating switching functions, including both tandem and local switching. Until we achieve that unified, simple, predictable, structure, the industry will continue to misapply investment. When competitors are faced with an underlying rate structure that drives unsound investments, they either make those investments, knowing that the rules are subject to change, but hoping that they will not change significantly, or they will choose not to invest at all. In either case, consumers are prevented from the

¹ In the Matter of Developing a Unified Intercarrier Compensation Regime, CC Docket No. 01-92. See, Comments of Qwest Communications International, Inc. filed August 21, 2001 and Reply Comments of Qwest Communications International, Inc. filed November 5, 2001. (Copies Attached.)

1		benefits of fair competition.
2		
3		The current patchwork of intercarrier compensation mechanisms, including switched
4		access, are based on pre-divestiture and pre-Telecommunications Act regulatory
5		schemes that no longer further the policies of recent law or this Commission. They
6		reflect and reinforce artificial distinctions among carriers, customers and services, and
7		create unavoidable opportunities for economically irrational, regulation-driven
8		arbitrage.
9		
10	Q.	WILL CONSUMERS BENEFIT FROM THE PROPOSED SWITCHED
11		ACCESS REDUCTIONS?
12	A.	Yes. Since the intrastate toll market is highly competitive, it is reasonable to assume
13		that toll providers will pass through intrastate switched access reductions in the form
14		of lower toll rates. Competitive pressures, rather than additional regulation, should be
15		allowed to drive those reductions to customers. The reductions could save Nebraska
16		customers up to \$6 million in toll rates
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18		
19		VI. SUBSIDIES AND SWITCHED ACCESS
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21	Q.	ARE THERE STILL SUBSIDIES IN QWEST'S CURRENT INTRASTATE
22		SWITCHED ACCESS RATES?
23	A.	From Qwest's perspective, the clearly identifiable subsidies have been removed from
24		intrastate switched access rates. This is certainly a debatable issue, however,
25		depending upon how one defines the factors that determine whether subsidies exist.
26		Applicable costs are certainly one area that has been and will be argued from various
27		perspectives and without a clearly agreed upon cost base, subsidies can not be clearly
28		quantified. In any case, the restructuring of switched access should be continued even

if quantification of subsidies or their very existence is not agreed upon. Too much consideration of subsidies will only divert attention from the real goal of access restructure which is establishing a rate structure that is sustainable in a fully competitive telecommunication market.

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While the Commission began this restructuring program to eliminate implicit subsidies, it should continue the restructuring effort even if the subsidy issue remains unresolved. Once access is fully restructured and priced at competitively neutral rates, the issue of subsidies in switched access rates will become moot.

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Q. WHAT DOES THE HISTORY OF SWITCHED ACCESS RATES HAVE TO DO WITH THE EXISTENCE OF CURRENT SUBSIDIES?

When switched access rates were first created, with the divestiture of the Bell System, A. they included more contribution than would have been normal from a market perspective. Prior to the divestiture of the Bell System, and the proliferation of competition in the long distance market, long distance rates were kept high in support of low local service rates for public policy reasons. The concept of universal service drove this implicit subsidy in toll rates. Toll service was still considered somewhat of a luxury and it made sense, from a policy perspective, to keep these rates artificially high to promote the concept of universal local service. This subsidy was intended to support the Non-Traffic Sensitive (NTS) portion of local service. The NTS portion of local service is the loop, the cost of which does not vary with usage. Switched access rates were developed to keep long distance carriers on equal ground competitively. while maintaining significant support for local service. The easily identifiable implicit subsidy was the CCL charge, but maintaining relatively high rates for other switched access rate elements also supported this concept. The amount of this contribution, above cost, which is higher than might otherwise be reasonable in a competitive market, is a matter of public policy. This higher contribution level helped offset low basic exchange rates.

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VII. <u>SWITCHED ACCESS RESTRUCTURE - A</u> BETTER SOLUTION

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Q. WHAT RESTRUCTURE OF SWITCHED ACCESS RATES IS QWEST PROPOSING IN THIS PROCEEDING?

A. Qwest is proposing to further reduce intrastate switched access to the current interstate level on a revenue neutral basis with an equal offset from an ISLC. Current intrastate switched access revenue is approximately \$10.6 M. A reduction to the interstate level would reduce Qwest's intrastate switched access revenues to approximately \$4.5 M, resulting in a \$6.1 M reduction to be offset through a new Intrastate Subscriber Line Charge (ISLC).

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In its April 30, 2002 Transition Plan filing, Qwest had proposed to make the same intrastate switched access rate reduction, but with a revenue neutral offset from the Nebraska Universal Service Fund (NUSF), rather than through an ISLC.

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Q. WHY IS QWEST AMENDING ITS PROPOSAL AT THIS TIME?

19 A. Qwest has already removed the clearly identifiable subsidies that were previously 20 collected through intrastate switched access rates (i.e., CCL). Qwest believes that further restructuring of intrastate switched access is necessary to reduce jurisdictional 21 pricing disparity, including the issues associated with such disparity, and to promote 22 rational economic pricing. As the Commission moves further toward a more 23 permanent NUSF plan, the timing is right for Qwest to address what it believes to be 24 the most appropriate way to accomplish further switched access restructuring. For the 25 long term, the proposed access rate reductions are more appropriately recovered 26 27 through implementation of an ISLC, rather through NUSF support. The NUSF 28 should be used to support lower prices for high cost areas. The ISLC is a flat rate 29 charge attributed to the customer, who is the user of the loop. It is competitively

neutral and is sustainable as a long-term method of recovering this support because it recovers costs associated with the service being provided to the ISLC customers.

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Q. HOW MUCH OF AN ISLC WOULD BE REQUIRED TO OFFSET SWITCHED ACCESS REDUCTIONS IN THIS FILING?

A. With this filing, Qwest is proposing an intrastate switched access reduction of 6 approximately \$6.1 M. The reduction should be accomplished by applying Qwest's 7 currently tariffed interstate switched access rates to Qwest's existing intrastate 8 switched access rate structure. Qwest anticipates that the amount of the offsetting 9 ISLC will be approximately \$1.25 per each business and residential access line, per 10 11 month. Access lines for which eligible subscribers pay reduced charges under the provisions of the Nebraska Lifeline Program should be exempt from application of 12 the ISLC. 13

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Q. WHY SHOULD SUCH A RESTRUCTURE BE REVENUE NEUTRAL?

The pricing restructure proposed here is largely driven by public policy and the need A. 16 to establish competitively neutral pricing platforms. As the telecommunications 17 market becomes more and more competitive, it is important to eliminate many of the 18 pricing policies of the past 100 years. This will allow for robust competition without 19 20 pricing anomalies that confuse customers and generate inefficient investment. 21 Revenue neutrality insures that companies are not penalized for the progressive restructuring of rates that are in the long term best interests of competition and 22 consumers. In theory, this restructure will be revenue neutral to consumers as a 23 whole, so it should also be revenue neutral to Owest. 24

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Q. HAS THE FCC SHIFTED ITS PUBLIC POLICY CONCERNING HIGH CONTRIBUTION IN SWITCHED ACCESS RATES?

Yes. Over the past several years, the FCC has reduced interstate switched access rates and increased the End User Common Line (EUCL) charge. This has effectively transferred the local service support from switched access rates to the EUCL charge.

These charges are flat rate charges applied on a per line basis. This has shifted local service support paid by carriers through switched access rates back to end users, where it should be.

A.

Q. IS THE SWITCHED ACCESS RESTRUCTURE PROPOSED BY QWEST IN THIS FILING CONSISTENT WITH THIS NEW FCC POLICY?

Yes. The intrastate switched access reductions and corresponding revenue neutral offsets proposed by Qwest are consistent with the action and direction of the FCC in its Intercarrier Compensation docket and, specifically, in its *CALLS* Order. Qwest believes that interstate switched access will continue to decline and will eventually go to zero, as the FCC moves closer to a bill and keep regime for all intercarrier compensation². Qwest supports moving to bill and keep and has stated such in its comments filed with the FCC in the Intercarrier Compensation Docket. The FCC completed its initial restructure of interstate switched access in 2000, through implementation of its *CALLS* Order³. Qwest's proposal is completely consistent with that Order. In fact, the FCC recently approved another increase in the federal EUCL to \$6.00 per access line.⁴ With Qwest's proposed additional restructure, Qwest's intrastate switched access rates will move to parity with interstate rates, accomplishing a significant step toward more rational economic pricing for intercarrier compensation.

Q. WHAT ARE THE BENEFITS OF RESTRUCTURING SWITCHED ACCESS RATES?

24 A. The five key benefits are that such a restructure will:

² See, provided herewith, "Declaration f William P. Rogerson" dated November 5, 2001.

³ Simply put, the so-called CALLS Plan instituted a transitional access restructure for larger ILECs by reducing interstate switched access and implementing an interstate end user subscriber line charge. That shifted revenue recovery from end users through toll charges to end users through flat rated monthly rates. See, Access Charge Reform, Sixth Report and Order, 15 FCC Rcd 12962 (2000) ("CALLS Order"). A similar transitional plan has been adopted for non-price cap LECs. See Multi-Association Group (MAG) Plan for Regulation of Interstate Services of Non-Price Cap Incumbent Local Exchange Carriers and Interexchange Carriers, Notice of Proposed Rulemaking, 16 FCC Rcd 460 (2001).

- 1) Reduce the incentive for uneconomic bypass of the switched network;
- 2 2) Remove economic penalties for carriers that rate average their toll plans;
 - 3) Reduce the confusion to customers who have to deal with many rate plans driven by a wide variety of switched access rates;
 - 4) Eliminate toll usage rated support for end-user NTS flat-rated costs; and,
 - 5) Eliminate the hidden support that all users of the network pay, but in various and incalculable ways.

Q. WOULD YOU PLEASE EXPLAIN EACH OF THESE PROBLEMS MORE FULLY?

11 A. Yes.

1) Uneconomic bypass often occurs when service providers bypass the switched network with dedicated facilities. These facilities are attractive because switched access rates are relatively high. To the degree that these bypass facilities carry local traffic, they merely represent a competitive alternative. To the degree that they carry toll traffic, they bypass switched access and therefore bypass the support for local service that is built into current rates. The crossover point between paying switched access rates and providing dedicated bypass facilities shifts toward bypass the higher the switched access rates are. These dedicated facilities are typically not used to as great a capacity as they would be if utilized as part of the switched network. This creates wasted capacity and the cost of this waste is borne in one way or another by all ratepayers. In the simplest sense, those bypassing the network (or a portion of it) no longer contribute to the cost of that network and therefore the cost is borne solely by those not bypassing. Lower switched access rates mean that more service providers and customers will utilize the switched network that is more efficient with more use.

2) Even though state access rates differ from interstate rates, or differ from state to

⁴ FCC Order released June 5, 2002 in CC Docket No. 96-262, Cost Review Proceeding for Residential and Single Line Business Subscriber Line Charge (SLC) Caps.

state, or from LEC to LEC, interexchange carriers must price rates to cover costs in the aggregate. This means that if one state or LEC has higher than average switched access rates, the carrier will have to decide whether to create a specific rate plan for that area or accept lower contribution. Specific rate plans cost more to manage and accepting lower contribution is also a form of cost that must be absorbed. In either case, the carrier may choose to withhold some services in that area or create higher priced plans. The customer pays the price for this inefficiency.

3) To the degree that carriers choose to address the variety of widely different switched access rate structures with widely different toll rate plans, customer confusion is multiplied. There are enough marketing reasons to create multiple rate plans without adding the complexity of widely different switched access rates to the mix.

4) Currently, toll customers are paying more through higher toll rates caused by higher switched access rates than the actual cost of the resources used. Those who use more toll services pay disproportionately more because toll and the underlying switched access rates are driven by minutes of use rather than a flat rate. The underlying cause of these higher rates was driven initially by a usage-based recovery of flat rated NTS costs. A sound economic structure is the basis for a sound competitive environment and the structure will not be sound as long as customers are receiving more or less than they are paying for.

5) Since switched access rates are higher than they need to be in a fully competitive environment, carriers will choose to pass on these uneconomic costs in a variety of ways. Since the rates vary from jurisdiction to jurisdiction, different carriers will recover these costs in a variety of ways. Some may charge urban customers more because there is more ability to pay. Some may charge urban customers less because there is more competition. Some may have more rate plans to address

these variations. In any case, the cost recovery mechanism is hidden from the ultimate consumer. Because of this, consumers will have a difficult time making sound choices between providers. There are enough differences between providers because of size, service area, and marketing approach already. Adding the complexity of how to recover for higher than necessary switched access costs adds to the fact that these costs are not paid by the cost-causer.

VIII. UNIVERSAL SERVICE FUNDS

Α.

Q. WHAT IS THE CONCEPT OF UNIVERSAL SERVICE?

The concept of universal service is that society benefits as a whole when all citizens have access to reasonably priced telephone service. All customers benefit when they can not only place calls to others, but also receive calls. This typically is most relevant in rural or high cost areas where telephone service is difficult and/or expensive to provision. Traditionally, maintaining high rates for some services such as toll (once considered to be a luxury service) helped to provide cost support for higher cost services in rural or remote areas.

A.

Q. WHAT IS THE PURPOSE OF A UNIVERSAL SERVICE FUND?

Universal service funds are intended to provide cost support for higher cost service areas such as rural or remote parts of a state. They are aimed at promoting the universal service benefits described above. They are different from the old universal service concept however, in that these funds represent explicit subsidies for universal service. The old concept required hidden or implicit subsidies that are no longer viable or supported by the 1996 Telecom Act. These funds are explicit because their purpose is identifiable, the payments are quantifiable and they are competitively neutral.

USF support should not be used to provide cost recovery for all services. The intent of the USF is for all consumers to "have access to telecommunications and information services, including interexchange services and advanced telecommunications and information services, that are reasonably comparable to those services provided in urban areas". Further, these services must be "available at rates that are reasonably comparable to rates charged for similar services in urban areas." USF support should be used to address the disparity of costs across a region, whether the region is national in scope or regional, such as a state. Generally, urban areas are densely populated and consumers have several telecommunications providers with operations that benefit from significant economies of scale. Customers in high cost areas should benefit from the federal and state USF mechanisms that help promote widespread telecommunications.

Q. DOES QWEST SUPPORT THE USF CONCEPT?

A. A. Yes. USF support is a very appropriate way to address the disparity in the cost of providing services across a wide region. The density of customers largely drives the economics of providing telecommunication service. USF support is a reasonable way to address these cost disparities and Qwest supports the concept of universal service.

Universal service support is identifiable, the payments are quantifiable and the support is a competitively neutral method to subsidize the prices of particular customers (i.e. high cost rural customers). This targets the payments to customers who are in need of this subsidy. In this proceeding, however, Qwest is proposing to move the payment for local service costs from the interexchange carrier to the end user who directly benefits from the service being provided, rather than to the NUSF.

Q. IS THE SHIFT OF REVENUE FROM SWITCHED ACCESS TO THE NUSF,

⁵ See the federal statute, Title 47, Section 254 (b) (3)

THE BEST WAY TO ACCOMPLISH REVENUE NEUTRALITY?

A. No, not as a permanent solution. It is not the best way or the most economically sound way to offset such reductions. This method of recovery will become more problematic as the industry continues to evolve toward full competition, with a wide variety of alternatives available to most, if not all, consumers. Since the NUSF is funded by charges on end users, using the NUSF for this purpose merely creates an unnecessary middleman.

A.

Q. WHY SHOULD UNIVERSAL SERVICE FUND SUPPORT NOT BE USED FOR THE OFFSET OF SWITCHED ACCESS REDUCTIONS ON A GOING FORWARD BASIS?

The history of higher than otherwise reasonable switched access rates is based on the concept of supporting the non-traffic sensitive (NTS) cost with toll and access services. The NTS cost is primarily the loop and a portion of the end office switch. NTS costs do not vary with usage, so two loops of the same configuration, cost the same regardless of how the customers use them. The USF surcharge in Nebraska is based on revenue. This means that customers who use more telecommunications services and pay more in rates, contribute more into the fund than those who use these services to a lesser degree. While this is a practical way of supporting rural high cost services, it distorts the concept of flat rated support for flat rated loop costs. It means that some customers are paying more to support NTS loop costs, which are flat rated, than other customers. By shifting switched access rates to the USF support, the implicit subsidy for local service has been shifted from carriers to high usage customers. While this is a better, less punitive form of subsidy than higher access rates, it is not the best long-term solution for rationalizing switched access rates.

Q. IF THE NUSF FUNDING WERE FLAT RATED WOULD THE NUSF BE APPROPRIATE FOR THIS PURPOSE?

29 A. No. Creating a flat rated funding mechanism for the NUSF would certainly address 30 one major problem with using this fund as an offset for reduced switched access rates.

If this were done however, passing these funds through the NUSF would become 1 unnecessary. A flat rated charge per access line is what Qwest is proposing with this 2 filing. If such a flat rated charge were established, there would be no need to pass this 3 funding through the NUSF. It would be far more efficient to just allow Owest, or 4 other local service provider, to collect this charge directly, This is exactly what 5 Qwest is proposing. 6 7 8 Q. IS THE NUSF TRANSITION PLAN SUPPORT FOR ACCESS REDUCTIONS 9 **REASONABLE?** Yes. The recovery of switched access rate reductions through the NUSF has made 10 A. sense, particularly as a temporary measure. This mechanism eliminated subsidies 11 12 paid by carriers, which was a primary goal and shifted this revenue recovery to all end-users. Because USF support is supported by charges to end users, this is 13 preferable to high rates for carriers that pass them along to consumers in a variety of 14 15 ways. 16 Reducing implicit subsidies in switched access using the NUSF as an offset was an 17 acceptable approach. Now that a permanent NUSF Plan is near, however, it is timely 18 19 to review the intent of the NUSF and its role in the world of restructured switched 20 access. 21 WHAT HAS CHANGED THAT NOW MAKES THE USF APPROACH A Q. 22 23 POOR CHOICE, GOING FORWARD, FOR SWITCHED ACCESS OFFSETS? The USF still serves a purpose for targeted support to high cost areas, but the use of 24 A. USF support should be limited to narrowly tailored subsidies, not the broad access 25 reform that is now taking place. The emergence of new telecommunications 26 27 competitors and technologies point out the frailties of reliance on USF support for such revenues. 28 29

DOES THE SIZE OF THE USF HAVE AN IMPACT ON ITS VIABILITY?

Q.

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A. 1 Yes. The larger USF surcharge and support levels grow, the larger will be the contribution by large users. This larger contribution will generate more incentives to 2 find bypassing alternatives and new competitors will find niche technologies to serve 3 these customers. As bypass alternatives emerge, regulators may even be driven to 4 create new rules to insure the fund can support its obligations. This cycle will lead to 5 more regulation instead of allowing the market to regulate itself, which should be the 6 long- term goal of the industry. If USF support remains relatively small and only 7 addresses the fundamental needs of high cost service areas, then there will be less 8 incentive to find ways to avoid contributing to the fund. 9 10 11 IX. TRANSITIONING FROM NUSF TO AN ISLC 12 13 WOULD IT BE APPROPRIATE TO SHIFT THE CURRENT NUSF SUPPORT Q. 14 RESULTING FROM PREVIOUS QWEST INTRASTATE SWITCHED 15 ACCESS REDUCTIONS TO THIS NEW ISLC? 16 A. Yes, Qwest proposes that this transition occur as soon as practicable. 17 18 19 Q. HOW WOULD TRANSITIONING PREVIOUS SWITCHED ACCESS RESTRUCTURE OFFSETS FROM THE NUSF TO AN ISLC AFFECT THE 20 AMOUNT OF THE ISLC BILLED TO END-USERS? 21 A. Qwest currently has the potential to receive approximately \$20.4 million from the 22 NUSF due to previous intrastate switched access reductions. Shifting this to the 23 ISLC on an average basis would mean an increase from the \$1.25 associated with the 24 current switched access reduction proposal to a total of about \$5.00 per business and 25 26 residential access line, per month. Customers however, would also see an offsetting decease in their NUSF surcharges. 27 28

WOULD THIS AMOUNT EVER HAVE TO CHANGE IN THE FUTURE?

29

Q.

A. There are various concepts under consideration by the industry and the FCC, which would fundamentally change how access charges are collected. Qwest has been supporting a bill and keep approach to access charges in the FCC's current docket on intercarrier compensation. How these concepts are developed may have a future impact on this new ISLC, but not to a great significance. After this rate adjustment is made in Nebraska, Qwest will only have \$4.5 million in annual switched access revenues. Due to the emerging competitive landscape, this revenue will not dramatically change year to year and may even decline.

Additionally, the FCC's *CALLS* plan will remain in effect until 2005. At that time the FCC is expected to have completed its current intercarrier compensation docket and will have a new regime in place. Although future structure is unknown at this time, it will be important to be in step with the FCC, so that future evolution in switched access rates will not create large changes in the future.

Α.

Q. IS QWEST MODIFYING ITS APRIL 30, 2002 TRANSITION PLAN TO INCLUDE THIS NEW ISLC PROPOSAL?

Yes. Qwest is filing an Amended Transition Plan in conjunction with this testimony. Qwest believes it is in the public interest and in the interest of competition that the goal for switched access restructure should eliminate structural discrepancies on a jurisdictional level. As long as that goal is clear, we should move forward as quickly as is reasonable. To that end, it makes sense to establish an ISLC with this filing and commence the process to shift other NUSF support to the ISLC. We are proposing that a better long-term structure for all telephone service in Nebraska is to have an ISLC charged on a per-line basis, rather than recovering these revenues through a NUSF charge leaving the NUSF to focus solely on the more targeted needs of high cost customers. It will be competitively neutral and drive proper economic behavior by both customers and providers of service.

Q. CAN QWEST LIVE WITH THE STRUCTURE THAT USES THE NUSF AS

THE SOURCE OF SWITCHED ACCESS OFFSETS?

It is certainly preferable to the current structure with high switched access rates and therefore it represents an improvement. It is acceptable as an interim solution if a process for establishing an ISLC is implemented and a schedule for shifting revenues from the NUSF to an ISLC is established. Since a permanent USF plan has not been established, the future of the current mechanism is in some doubt. Qwest believes that the permanent NUSF plan will provide support for providing high cost service, and will not replace the recovery of implicit subsidies in prior switched access charges. As a result, it seems clear that shifting this burden away from the NUSF should begin now.

A.

X. CONCLUSION

A.

Q. PLEASE SUMMARIZE YOUR POSITION ON QWEST'S TRANSITION PLAN FOR SWITCHED ACCESS?

To achieve a market-oriented regime, the FCC and Nebraska Commission should work to support policies that move the industry toward lowering intrastate switched access rates to the federal level. With the FCC's completion of an initial restructure of interstate switched access, through implementation of its *CALLS* Order, the timing is right for this Commission to close the jurisdictional gap by taking state switched access to the federally tariffed level.

It is also appropriate to recognize that the FCC has taken significant steps to move support for local services back to the end user in a way that is consistent with cost causation. The FCC has indicated that it will continue with this philosophy in its current and future proceedings as the competitive nature of telecommunications continues to evolve. It is appropriate for the states to follow that lead and not stay too far behind. It will benefit consumers through improved competition based on an

1		economically sound and competitively neutral rate structure
2		
3	Q.	DOES THIS CONCLUDE YOUR TESTIMONY?
4	Δ	Ves it does

5

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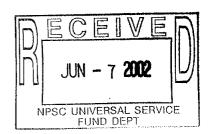
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Developing a Unified Intercarrier)	CC Docket No. 01-92
Compensation Regime	j	

COMMENTS OF QWEST COMMUNICATIONS INTERNATIONAL, INC.

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August 21, 2001



EXECUTIVE SUMMARY

In a rational telecommunications world, a carrier would be just a carrier and a call would be just a call. But this is not yet that world. Legacy regulation, rather than any underlying market necessity, is principally responsible for the balkanization of the telecommunications industry into specialized carriers providing specialized services. The existing crazy-quilt of intercarrier compensation schemes reflects and reinforces these artificial distinctions among carriers, and it creates unavoidable opportunities for economically irrational, regulation-driven arbitrage. Qwest's ambition, like the Commission's, is to shatter those artificial distinctions, and this proceeding is a critical step in the right direction. As an incumbent LEC, a CLEC, an IXC, an Internet backbone provider, an ISP, and a wireless provider, Qwest transcends regulatory typecasting, and it appears here not as a representative of any particular industry segment, but as a representative of the industry as a whole.

In Qwest's view, the ultimate objective of this proceeding should be the creation of a simple, predictable, and market-oriented intercarrier compensation regime that will apply to any hand-off of traffic on the public switched network, including local traffic, Internet-bound traffic, and conventional access traffic. The best choice for such a regime is bill-and-keep, under which each carrier would recover from its end users the costs of its own access facilities, including the costs of its loops and of the terminating switching function. That approach would present enormous advantages over the existing intercarrier compensation schemes – *i.e.*, the "calling party's network pays" ("CPNP") regime now applicable to local traffic and the access charge regime applicable to interexchange traffic.

First, bill-and-keep would largely resolve, without regulatory intervention, the basic problem underlying any approach to intercarrier compensation: the incentive and ability of

terminating carriers to charge extracompensatory rates for call completion. So long as carriers can demand intercarrier compensation for terminating calls of any kind, that "terminating access monopoly" can be alleviated through regulatory intervention, but never truly eliminated; only bill-and-keep can uproot the problem at its source. *Second,* by shifting cost recovery to end users, bill-and-keep would increase the role of market forces, and decrease the role of regulation, in resolving traditionally vexing questions of cost recovery. That advantage is important now, and it will become even more important as competition develops and the need for retail rate regulation diminishes. As competition develops and the telecommunications world is increasingly populated by non-dominant carriers, the choice between bill-and-keep and any variant of the CPNP regime is, at bottom, a choice between less regulation of competitive carriers and more. *Finally,* by eliminating any intercarrier charge for termination of traffic on the public switched network, bill-and-keep would increase regulatory stability and – just as important – reduce regulation-driven arbitrage opportunities.

The single most important variable in the establishment of any bill-and-keep regime is the problem of transport: the question of where one carrier's responsibility ends, and another's begins, in transporting calls between networks. Although the DeGraba proposal is a promising theoretical start, it suffers from a critical flaw. The default rule it prescribes (transport all the way to the terminating carrier's central office) is, as DeGraba himself acknowledges, a "penalty default" that would almost inevitably require carriers to engage in extensive, time-consuming negotiations. Like regulation, negotiation imposes significant transactions costs, and rules creating a pervasive need for it should be avoided where possible. The Commission should thus focus its inquiry on a default transport rule that reduces the need for both regulation and negotiation by more closely approximating the ways in which carriers actually interconnect in

the real world. And the Commission should similarly ensure that any transport rule it adopts preserves incentives for competitors to continue providing facilities-based transport alternatives.

The Commission should also accompany the adoption of bill-and-keep with a commitment to increased flexibility in the regulation of end-user rates. Bill-and-keep would fall short of expectations if, for example, access charges retained much of their current inefficient structure and the obligation to pay them in that form were simply shifted from interexchange carriers to end users. Instead, the Commission should allow all carriers, including those traditionally subject to retail rate regulation, to offer their customers a variety of alternative pricing plans – some more usage-sensitive, some more flat-rated – to cover the network costs that interstate access charges currently address. The Commission should also refine existing universal service mechanisms to accommodate what, under 47 U.S.C. § 254(g), would be one of the inevitable consequences of bill-and-keep: an increase in total telecommunications rates for end users in high cost areas. The carriers serving those end users, however, should receive additional federal subsidies only to the extent that the relevant end user rates would otherwise exceed an appropriate benchmark.

Finally, with the possible exception of intrastate access traffic, the Commission has legal authority to impose bill-and-keep for any exchange of traffic over the public switched network. That is true both for any interstate access service regulated under 47 U.S.C. § 201 and for any traffic governed by the intercarrier compensation standards of 47 U.S.C. §§ 251(b)(5) and 252(d)(2). Although section 252(d)(2) is ambiguous in some respects, it explicitly preserves bill-and-keep as a permissible default rule for all traffic subject to section 251(b)(5). Because this is an area in which national leadership is urgently needed, the Commission should impose bill-and-keep to the limits of its jurisdiction and, if necessary, persuade the states to follow suit.

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COMMENTS OF QWEST COMMUNICATIONS INTERNATIONAL, INC.

The ambition of the Telecommunications Act of 1996 is the creation of a telecommunications world characterized by much competition and little regulation: a world in which a carrier is just a carrier, a call is just a call, and private parties make the rules. This proceeding on intercarrier compensation is a bold and critical step toward realizing the Act's deregulatory vision, and Qwest applauds the Commission for opening it.

Of all the carriers that will be commenting in this proceeding, Qwest probably comes closest to sharing the Commission's own broad-based concern for the future development of the industry as a whole, and not just any particular segment of it. In the years since the Act's passage, Qwest has built itself into precisely the sort of boundary-shattering carrier that Congress envisioned, operating in almost every major sector of the telecommunications industry. Having merged with U S WEST, it is the nation's fourth largest incumbent local exchange carrier ("ILEC"), annually collecting roughly \$500 million in switched interstate access revenues. At the same time, Qwest is one of the country's largest interexchange carriers ("IXCs"), with more than \$650 million in annual switched interstate access *expenses*. Qwest is also a facilities-based competitive LEC ("CLEC") that competes for the customers of other ILECs, and to that end it will have deployed fiber rings in more than two dozen out-of-region cities by year's end. On top

of that, Qwest is one of the nation's largest providers of Internet backbone services and of various other services based on Internet protocol. And it provides wireless services to more than one million subscribers.

Qwest's objective is not to specialize in any particular one of these roles, but to pursue them all, in a free market, unfettered by regulations that perpetuate the legacy distinctions that have fragmented this industry. What Qwest seeks is an intercarrier compensation regime that ensures fair competitive conditions for all industry players and permits them to compete solely on their economic and technological merits. That, of course, is the Commission's own central goal in this proceeding. And, as the Commission itself has already tentatively concluded, the best way to ensure rational competition is to adopt bill-and-keep as the compensation rule for any hand-off of traffic on the public switched network.

As the Commission is aware, there now is no consistent scheme of intercarrier compensation rules; there is instead a crazy-quilt of different rules that arise from legacy regulation and follow legacy distinctions among carriers. Interexchange calls are governed by an "access charge" regime in which the carrier in the middle of a call pays the carriers on either end. Exchanges of traffic between LECs competing in the same service area are typically governed by a calling-party's-network-pays ("CPNP") regime, in which the originating carrier pays the terminating carrier for the latter's costs of transporting and terminating calls to their ultimate destinations. Interconnection between adjoining (non-competing) LECs is often, though not always, governed by bill-and-keep. And exchanges of traffic for the purpose of delivering a dialup call from the customer of an incumbent LEC to a CLEC serving an Internet service provider ("ISP") is now governed by a CPNP regime that, under current plans, will be phased out over time to become more like a bill-and-keep approach. The persistence of these methodological

differences has very little to do with technology or economics and everything to do with the retention of outdated, economically irrational regulatory distinctions.

This proceeding should have, as its ultimate goal, the creation of a unified intercarrier compensation regime in which those legacy distinctions are obliterated, regulation is rare, and utility-maximizing market forces rather than regulatory mandates drive distinctions among telecommunications carriers and services. To glimpse what such a regime would be like, one need look no further than the world of wireless telecommunications, a world that the Commission has largely exempted from legacy regulation. That regulatory restraint has resulted in meaningful competition – based on price, coverage, and quality of service – among different facilities-based providers; in de-emphasis of rigid distinctions between retail local and long-distance services; and in proliferation of unregulated, competing retail plans that solve the problem of network cost-recovery through creative mixes of flat-rated and usage-sensitive enduser charges.

Although the analogy should not be overstated (in part because wireless carriers are typically not rate-regulated dominant carriers or carriers of last resort), the Commission's successful experiment in non-regulation of wireless services is nonetheless instructive as an objective for the telecommunications world as a whole. The ultimate goal of this proceeding should be, as with the Commission's treatment of wireless, a stable and uncomplicated regulatory environment in which *carriers* and their *end users*, rather than *regulators*, decide which calls should be treated like which other calls and how the *costs* of calls should be recovered over time. To reach that goal, the Commission should begin its analysis with the following first principles:

• *Market-driven rates.* The costs of a call should be recovered in a way determined as much as possible by the carriers handling them rather than by regulators. That

approach is optimal because there is no "right" way to price calls so as to recover a carrier's total network costs. Put another way, regulation could never solve the problem of network cost recovery as well as the market; and, to avoid inefficiency and arbitrage, regulators should therefore leave resolution of that problem as much as possible to carriers and their end users.

- Consistency. The same basic principles of intercarrier compensation should apply to any hand-off of traffic over the public switched network for any traffic that touches that network. The rules should not vary with the traditional treatment of any given carrier under legacy regulation. Neither should those rules vary with the type of technology or architecture employed by a particular carrier within its network.
- Simplicity. When carriers and end users understand the rules and can rely on their continued applicability into the foreseeable future, they will make efficient decisions regarding the development and use of telecommunications facilities. In contrast, preservation of the existing patchwork of complex and constantly changing intercarrier compensation schemes would have the opposite effect: it would continue to depress rational facilities-based investment and skew the competitive marketplace.

These first principles should be uncontroversial, but they have powerful consequences for the outcome of this proceeding. In these comments, Qwest builds on these principles in proposing the following courses of action.

First, the Commission should adopt bill-and-keep as the appropriate default rule for all traffic, including access traffic, that uses the public switched network. (For these purposes, "bill-and-keep" is broadly defined to mean any compensation rule that would preclude a carrier from charging another carrier for any of the costs of its own local access facilities, including the loop and the local switch that serves it. See NPRM ¶ 8 n.10.) Particularly as competition expands and consumers enjoy greater choices among different telecommunications providers, bill-and-keep is the optimal default rule for intercarrier compensation because (1) it would eliminate market-distorting arbitrage opportunities, and the effects of the "terminating access monopoly," without resort to regulatory intervention; (2) it would permit market forces, rather than regulation, to resolve the question of cost recovery; and (3) by setting intercarrier compensation for

termination costs at a permanent rate of zero, it is far simpler and more predictable in application than any rival approach. Section I of these comments addresses these issues in detail.

Second, the Commission should seek further comment before reaching any final decision on the single most important variable that separates the different proposed versions of bill-and-keep: the proper allocation of responsibility for transport. Although the DeGraba proposal discussed in the NPRM is a promising start, that proposal falters in proposing a "penalty default" that may be inefficient and would automatically require time-consuming negotiations among carriers. The Commission should nonetheless build on the DeGraba proposal and look for ways to improve it. It should focus that inquiry by emphasizing that an optimal transport solution would achieve the following objectives: (1) reduce the need for regulation, (2) prescribe an efficient default outcome that reduces the very need for negotiation in many cases, and (3) preserve appropriate incentives for the development of facilities-based competition in the provision of transport services. And it should accordingly investigate whether there might be efficient default rules that would permit originating carriers to relinquish transport responsibility at points that better match the ways in which carriers actually interconnect.

¹ Patrick DeGraba and coauthors Jay Atkinson and Christopher Barnekov filed separate Office of Plans and Policy "white papers" in December 2000 proposing different versions of bill-and-keep, and their proposals form the backdrop of the NPRM. See Patrick DeGraba, "Bill and Keep at the Central Office as the Efficient Interconnection Regime," OPP Working Paper #33 (2000) ("DeGraba") and Jay M. Atkinson & Christopher C. Barnekov, "A Competitively Neutral Approach to Network Interconnection," OPP Working Paper #34 (2000) ("Atkinson/Barnekov"). Although the two white papers appear to disagree on the question of transport (as discussed in Section II below), they agree on two basic principles of bill-and-keep: (1) that an originating carrier may not charge another carrier for costs internal to the first carrier's network; and (2) that a terminating carrier should be responsible for all of its own termination costs (i.e., the cost of the loop and end-office switching).

Third, to realize the full potential of bill-and-keep, the Commission should grant all carriers flexibility in the way in which they bill end users to recover the costs that they previously recovered from other carriers. Adoption of bill-and-keep would not eliminate the network costs that LECs currently recover through access charges, and LECs would need to recover those costs directly from end users – rather than, as now, indirectly from end users through IXCs. Although bill-and-keep is an indispensable methodological step in the right direction, many of its principal benefits can be achieved only if the Commission simultaneously ensures that all carriers, including those subject to retail rate regulation because they have been deemed "dominant," will have significant flexibility in the manner in which they charge end users for the services currently subject to access charges. The Commission would not achieve what it has set out to achieve if, in adopting bill-and-keep, it did no more than shift the current market-insensitive structure of access charge payments from IXCs to end users. Instead, incumbent LECs should be permitted to experiment, just as wireless carriers and CLECs now do, with a range of flat-rated and usage-sensitive plans for their subscribers.

Finally, although the elimination of access charges would require end users in high cost areas to bear much greater responsibility for the unusually high cost of serving them, the Commission should address that concern through appropriate adjustments to existing universal service mechanisms. In so doing, the Commission may need to increase federal universal service funding to defray some of the cost of serving those end users, but only to the extent that those end users would otherwise pay rates that exceed an appropriate benchmark. Moreover, the Commission should consider exercising its statutory discretion to expand the base of universal service contributors to include all providers of "telecommunications," including, for example, providers of cable modem service.

The final section of these comments addresses the Commission's legal authority to impose bill-and-keep for all traffic that uses the public switched network. With the possible exception of intrastate access charges, the Commission has such legal authority with respect to all such traffic, including traffic that falls within the scope of 47 U.S.C. § 251(b)(5). Although the accompanying pricing provision – section 252(d)(2) – is ambiguous in a number of key respects, the bill-and-keep savings clause of section 252(d)(2)(B) confirms that, whatever else the statute may prescribe, it undoubtedly permits "arrangements that *waive* mutual recovery [of costs] (*such as bill-and-keep arrangements*)." 47 U.S.C. § 252(d)(2)(B) (emphasis added). Viewed in combination with section 252(d)(2)(A), that provision is most reasonably construed to give the Commission a *choice*, in prescribing a compensation scheme for any given class of traffic, between *either* bill-and-keep *or* a cost-based CPNP regime; and the Commission is free to choose the former rather than the latter if it believes that doing so would serve the public interest.

I. Bill-and-Keep Would Offer Substantial Advantages Over the CPNP and Access Charge Regimes.

The prevailing intercarrier compensation regime consists of two related systems. First, local traffic subject to section 251(b)(5) is governed by a pure CPNP scheme, in which the called party's network collects full compensation from the calling party's network for all of the costs of transporting and terminating a call. Second, conventional interexchange traffic, traditionally characterized by the involvement of *three* carriers in any given call, is governed by the "access charge" regime, in which the caller's IXC pays both the calling party's LEC and the called

party's LEC for all costs of originating and terminating the call.² One key feature those regimes have in common is a pervasive need for regulation: because any given LEC is entitled to collect compensation from other carriers to recover costs associated with the LEC's own network, regulators must ensure that the rates charged bear some resemblance to the costs incurred.

Bill-and-keep would eliminate such intercarrier compensation and would instead require each carrier to *internalize* the costs of its network and pass them on to its own end users. Thus, particularly where those end users have choices among telecommunications providers, bill-and-keep would permit market forces, rather than regulation, to determine the best means for recovering those costs; and, in *all* circumstances, it would deprive carriers of any opportunity to exact supracompetitive rates from another carrier for the termination of any call. In a nutshell, that emphasis on simple, market-driven solutions to traditionally vexing regulatory problems explains why bill-and-keep is preferable to either CPNP or the access charge regime. Bill-and-keep is preferable to those alternatives *now* as a method of eliminating arbitrage opportunities, as the Commission has learned in the context of ISP-bound traffic. And, as discussed below, bill-and-keep will become even more preferable as competition continues to develop and the need for

² The Commission devoted only one paragraph in the NPRM (¶ 97) to the application of bill-and-keep to interstate access traffic. In that paragraph, the Commission noted that, while "[t]he long-term goal of this *NPRM* is to develop a uniform regime for all forms of intercarrier compensation, including interstate access," it did not "anticipate implementing major changes to our access charge rules in the initial phase of this proceeding." *Developing a Unified Intercarrier Compensation Regime*, Notice of Proposed Rulemaking, CC Docket No. 01-92, FCC 01-132 (rel. Apr. 27, 2001) ("NPRM"). The Commission explained that, under the so-called *CALLS* plan, the structure of current access charge regime for price-cap LECs will persist, with some modifications, until the expiration of the plan on June 30, 2005. *See Access Charge Reform*, Sixth Report and Order, 15 FCC Rcd 12962 (2000) ("CALLS Order"). A similar transitional plan has been proposed for non-price cap LECs. *See Multi-Association Group (MAG) Plan for Regulation of Interstate Services of Non-Price Cap Incumbent Local Exchange Carriers and Interexchange Carriers*, Notice of Proposed Rulemaking, 16 FCC Rcd 460 (2001).

regulation of end user rates subsides. Because in this proceeding the Commission should pick a compensation rule to last well into this new century,-it should choose a rule that is designed to accommodate, rather than frustrate, the development of full-blown competition in this industry.³

A. Bill-and-keep is the most direct, deregulatory solution to the terminating access monopoly problem.

At its root, the problem of intercarrier compensation arises because there are many telecommunications networks in the world, calls must cross from one network to another, and some rule must govern how compensation for the costs of those calls should be allocated across those networks. The traditional solution is to permit the terminating carrier to charge the originating carrier (or the IXC) for its costs in completing the call. The most basic flaw in that approach is that the terminating carrier has an obvious incentive to charge other carriers rates that exceed compensatory levels. Moreover, because the terminating carrier typically controls the only switch and only line leading to the called party (and thus enjoys a so-called "terminating

³ Under the Commission's current rules for "local" traffic covered by 47 U.S.C. § 251(b)(5), a terminating carrier is entitled to collect, within the category of "termination," only the costs of end-office switching; it may not recover any portion of its fixed loop costs, which are borne entirely by that carrier's end users. See Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, First Report and Order, 11 FCC Rcd 15499, 16024-25 ¶ 1057 (1996) ("Local Competition Order"); Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, Intercarrier Compensation for ISP-Bound Traffic, Order on Remand and Report and Order, CC Docket Nos. 96-98 and 99-68, FCC 01-131 (rel. Apr. 27, 2001) ¶ 68 ("ISP Reciprocal Compensation Order"). (Under the existing access charge regime, the regulatory goal, though not in all cases the current practice, is to remove loop costs from the charges that IXCs pay LECs.) Thus, the most straightforward difference between bill-and-keep and CPNP is that, under CPNP, the originating carrier compensates the terminating carrier for the costs of end office switching (in addition to transport), whereas under bill-andkeep the terminating carrier absorbs those end office switching costs itself. The question of transport is somewhat more complicated: as discussed, under both CPNP and some but not all versions of bill-and-keep, the originating carrier pays all the costs of transport. (Under the access charge regime governing interexchange calls today, the IXC pays the applicable transport costs.) We discuss these distinctions in greater detail below.

access monopoly" in placing calls to that party), it often has not just the incentive, but also the ability, to charge extracompensatory rates to the other carriers, unless regulators step in to cap the rates. See NPRM § 53.

So long as one carrier may charge others for the costs of terminating calls, this "terminating access monopoly" would be a problem even under the best of circumstances. The terminating carrier could often succeed in imposing extracompensatory rates even if the carriers that must pay them were able (and they usually are not) to flow them back to their own end users. That is so because those end users typically have no control over the terminating carrier's subscribers and thus are likely to have little leverage in persuading those subscribers to choose a different carrier with lower terminating rates. As it happens, existing regulation makes the problem even worse, because it generally *precludes* the originating carrier or the IXC from flowing a particular terminating carrier's charges back to the calling parties or from assessing those charges on the terminating carrier's own customers. For example, state regulators often (though not always) preclude incumbent LECs from imposing usage-sensitive rates on residential subscribers for local calls; that is one reason why incumbent LECs have complained that their end users lack adequate price signals to use the local network efficiently when placing dial-up calls to ISPs. An analogous restriction arises in federal law under 47 U.S.C. § 254(g), which requires IXCs to spread their recovery of access charges across their entire customer base - and therefore shields the calling party from any awareness of, much less any need to complain about, the access charges assessed by the terminating LEC.⁴

⁴ See 47 U.S.C. § 254(g) ("the rates charged by providers of interexchange telecommunications services to subscribers in rural and high cost areas shall be no higher than the rates charged by each such provider to its subscribers in urban areas").

Properly implemented, bill-and-keep would address the very root of the terminating access monopoly problem by depriving the terminating carrier of the right to collect from another carrier any amount for the termination of a call. Conversely, so long as the Commission retains the CPNP and access charge regimes, the terminating access monopoly problem will persist and, particularly when combined with regulatory restrictions on the flow-back of terminating carrier charges to calling parties, will always create a need for regulation to keep those charges under control. Such regulation has traditionally taken the form of access charge regulation (for interexchange calls) and reciprocal compensation rules (for local calls). Indeed, the consequences of the terminating access monopoly are so acute that the Commission recently had to take the unusual step of subjecting CLECs to its general rate regulation authority under section 201 of the Communications Act, limiting the access charges that CLECs may assess IXCs for the termination of interexchange calls.⁵

The Commission's need to exercise that general ratemaking authority over CLECs is a powerful sign that something fundamental is wrong with the existing intercarrier compensation regime. Over the long term, as consumer choices expand, fewer and fewer carriers will be dominant, and more and more carriers should be freed from any need for regulatory oversight of the rates they charge their end users. Put another way, in the long run, most carriers will be CLECs, whether or not they once were ILECs. In its starkest terms, therefore, the question here is whether it makes sense, as an intercarrier compensation policy for the new competitive telecommunications era, to subject all carriers (including CLECs) to more regulation rather than

⁵ See Access Charge Reform, Reform of Access Charges Imposed by Competitive Local Exchange Carriers, Seventh Report and Order and Further Notice of Proposed Rulemaking, CC Docket No. 96-262, FCC 01-146 (rel. Apr. 27, 2001).

less. As discussed in the following sections, the answer is plainly no, and bili-and-keep – which would resolve the terminating access monopoly problem potentially *without* regulation – is a far preferable alternative.

B. Properly implemented, bill-and-keep would leave the question of cost recovery, as much as possible, to market forces rather than regulation.

Few issues have been the subject of greater regulatory controversy in recent years than (i) what the "true" costs of terminating telecommunications traffic are, (ii) what the most rational rate structure for recovering such costs is (e.g., per minute vs. flat-rated, the proper role for "peak load" considerations, etc.), and (iii) whether termination costs are typically the same for one class of carriers (such as incumbent LECs) as they are for another (such as CMRS providers or those CLECs that specialize in ISP-bound traffic). And, as the Commission itself has acknowledged, regulators, despite their expertise and dedicated effort, are unlikely ever to set termination rates at truly efficient levels. See ISP Reciprocal Compensation Order ¶¶ 75-76. That is so for several independent reasons.

First, it may be conceptually impossible for any regulator to devise a single, economically rational mechanism for recovering termination costs. In a traditional business with low fixed and substantial incremental costs, a company is expected to set price at marginal cost. But one attribute of a typical telecommunications network (and of any industry with very high fixed costs and low marginal costs) is that, at all points on the supply-demand chart, average cost exceeds marginal cost. Thus, setting prices at marginal cost would obviously leave the telecommunications company unable to recover its fixed costs.

That attribute traditionally fueled the beliefs that a telecommunications network is a natural monopoly; that one carrier (e.g., the Bell System) should provide ubiquitous services within a particular calling area with minimal interconnection obligations; and that rates could be

adjusted to reflect a wide range of different political and social goals so long as that carrier's cost recovery was sufficient in the aggregate. Ever since-MCI began offering services in competition with the Bell System, however, regulators have struggled with the problem of setting intercarrier rates for recovery of costs. There is no economically satisfying solution to that problem, because (1) individual calls "cause" only very small (and sometimes negligible) marginal costs, and (2) every carrier must find some way to recover its fixed costs over time. Traditionally, the Commission has regulated money flows from one carrier to another largely (though by no means entirely) on a per-minute basis, even as it has looked for additional ways to convert per-minute charges into flat-rated ones.⁶ For example, that per-minute cost-recovery framework has largely governed access charges and compensation for LEC-to-LEC traffic, including ISP-bound traffic.

But per-minute cost recovery – and, more generally, any single regulatory plan for intercarrier cost recovery – inevitably fails to reflect the way in which costs are actually incurred. The case of transport and termination costs, the costs principally at issue in this proceeding, is particularly instructive. A carrier incurs most such costs not when it terminates a given call, but when it purchases the switching capacity necessary to ensure that the call can be terminated during the peak load portion of the day. *See, e.g., ISP Reciprocal Compensation Order* ¶ 76. Indeed, for that reason, per-minute termination pricing arguably creates a cross-subsidy running from those who use the network principally during off-peak hours to those who use it principally during peak hours. Of course, regulators could try to tweak the system such that carriers charge more for use during peak periods, an approach analogous to a cost-recovery methodology

⁶ See CALLS Order, 15 FCC Rcd at 13017 ¶ 134; Access Charge Reform, First Report and Order, 12 FCC Rcd 15982, 16034-35 ¶¶ 123-24 (1997); see also Access Charge Reform, Fifth Report and Order and Further Notice of Proposed Rulemaking, 14 FCC Rcd 14221, 14327-33 ¶¶ 208-225 (1999) ("Pricing Flexibility Order").

sometimes used in the electric power industry.⁷ But, even apart from the pragmatic obstacles to that approach (discussed below), that arrangement would also misrepresent the inevitably lumpy manner in which costs (*i.e.*, the costs of the necessary switching capacity) are incurred.⁸

Second, even if it were conceptually possible for regulators to set cost-sensitive rates to recover termination costs, the pragmatic obstacles might nonetheless be insurmountable. To begin with, switching technology changes over time, and regulation simply cannot keep pace with the latest cost-reducing developments. Also, because different carriers have different network architectures and termination facilities, they have different costs of termination, and it would be nearly impossible for regulators to address those costs on a carrier-by-carrier (or switch-by-switch) basis. As the Commission has rightly observed, "there may be administrative difficulties in establishing peak-load pricing schemes that may outweigh the benefits," since the differences in termination costs "are likely to vary depending on the network, and the amount and type of traffic terminated at a particular switch." Local Competition Order, 11 FCC Rcd at 16028-29 ¶ 1064; accord ISP Reciprocal Compensation Order ¶ 76.

By definition, bill-and-keep would resolve many of these problems so long as every carrier has some flexibility in the assessment of retail end user rates. The most immediate benefits of bill-and-keep would appear in the form of a much smaller role for regulation in the business practices of CLECs and, where competition has freed them from traditional rate regulation, incumbent LECs as well. In those settings, the core advantage of bill-and-keep is that

⁷ See W. Kip Viscusi, John M. Vernon & Joseph E. Harrington, *Economics of Regulation and Antitrust* 379-86 (3d ed. 2000).

⁸ As discussed below, many of these concerns also apply to transport costs, which are lumpy as well. Cables and fibers used for such transport are installed in bulk, not on an incremental strand-by-strand basis as they are needed.

it would allow carriers to come up with menus of creative pricing plans to recover (from end users) the costs of the network generally, including the costs of terminating traffic. Where competition has developed, those plans would be subject to full-blown market pressures: if the rates are too low, the carrier will fail to recover its costs, and if they are too high (compared to what other carriers offer), consumers will switch to other carriers. Those market pressures are much more likely than regulatory prescriptions to produce efficient results.

As discussed in Section III below, a true solution to this set of problems would require a commitment, not just to bill-and-keep, but also to some flexibility in the rates that carriers may charge their end users for the recovery of costs that used to be recovered from other carriers. But bill-and-keep would remain a necessary element of the solution for the reasons discussed elsewhere in this section. Moreover, precisely because it shifts the cost recovery responsibility to end users rather than other carriers, bill-and-keep would permit far greater flexibility, and thus far greater efficiency, than the existing intercarrier compensation schemes in the recovery of termination costs, even if those resulting rates are still subject to regulatory oversight. That is because a carrier has a steady, one-to-one relationship with any given subscriber that it does not have with the multiplicity of other carriers. A carrier and its subscriber can enter into a variety of efficient plans customized to their particular needs -e.g., a large bucket of minutes for a flat monthly fee. Under the existing compensation schemes, by contrast, each carrier may generally have to recover costs from every other carrier on a call-sensitive basis because there may be no other feasible way to allocate such costs among different carriers. That fact alone may typically preclude any non-usage-sensitive rate structure for the recovery of termination costs under any CPNP regime.

C. Bill-and-keep would reduce opportunities to engage in regulatory arbitrage and anticompetitive uncertainty about the future course of regulation.

Any time a regulator sets intercarrier compensation rates at levels that do not faithfully track the frequently changing costs of the work performed – a problem that, as discussed, will beset any effort to approximate termination costs with regulated rates (see ISP Reciprocal Compensation Order ¶¶ 75-76) – the inaccuracy will give rise to destabilizing arbitrage opportunities. The most notorious example involves the termination of ISP-bound traffic. Although many CLECs have provided a variety of services to a broad base of customers, some CLECs have specialized in the termination of traffic to ISPs. CLECs have done so not because that class of services creates greater overall value than other telecommunications services, but principally because (until the Commission intervened this past April) the prescribed termination rates exceeded the underlying costs of termination, and the CLECs in question were thus able to extract extracompensatory subsidies from originating carriers. See ISP Reciprocal Compensation Order ¶¶ 67-76. As discussed above, that problem was exacerbated by the fact that most incumbent LECs cannot flow those extracompensatory costs back to the end users that make the calls at issue, because, given existing regulatory obstacles, most incumbents cannot generally charge residential subscribers usage-sensitive rates for local traffic or dial-up Internetbound traffic. As a result, the end users initiating such traffic received no price signals encouraging them to use the network efficiently.

Moreover, because the effects of regulation on the marketplace are so unpredictable, the short-term arbitrage opportunities created by regulation sow uncertainty and instability, and those factors in turn impair rational investment decisions.⁹ That is one essential lesson of the ISP

⁹ Arbitrage opportunities can also retard the deployment of value-creating new services to consumers. For example, DeGraba claims that, "[b]ecause the use of per-minute termination charges appears to be incompatible with the use of packet-switched technology, carriers that

reciprocal compensation experience: whenever a regulatory arbitrage opportunity arises, a few carriers will adopt business plans designed primarily to take advantage of that opportunity. At that point, changing the rules to restore regulatory rationality can cause severe economic dislocations.

Bill-and-keep would reduce these inefficient arbitrage opportunities by requiring each carrier to internalize its own costs of termination, thereby replacing regulatory solutions to the question of cost-recovery with market-driven solutions. The example of ISP-bound traffic is instructive. So long as originating LECs must pay for the costs of terminating such traffic, and so long as they are barred from "flowing back" those costs to the particular end users that cause them, the result will be economically inefficient on two levels: termination rates will imperfectly match termination costs, and – just as important – cost causers will receive no price signals (from either a carrier or an ISP) to use the network efficiently.

Bill-and-keep would largely eliminate both of those problems. A CLEC providing termination services to an ISP, for example, would negotiate a price with the ISP itself to cover the costs of termination, and the products of such free-market negotiation would almost certainly approximate "true" termination costs more effectively than regulation could. Similarly, bill-and-keep would, in those same circumstances, provide what CPNP can never provide (at least in the absence of any flow-back mechanism): price signals for end users to use the network efficiently. In particular, since bill-and-keep would require ISPs, rather than originating LECs, to pay for the

terminate more traffic than they originate may well refuse to cooperate with other carriers in jointly adopting compatible packet-based technologies if this means that they will lose reciprocal compensation revenues." DeGraba ¶ 85.

costs of termination, those ISPs would often have, for the first time, an incentive to ensure that their own subscribers use the network with greater efficiency.

A different regulatory dilemma that has arisen from existing intercarrier compensation schemes concerns the recent growth of Internet telephony services. The popularity of Internet telephony has grown in part because enhanced services are typically exempt from access charges under current regulation. The contours of that "access charge exemption," however, are unclear. For example, some IXCs claim that *any* voice traffic employing IP is subject to the access charge exemption, even when it is otherwise indistinguishable from conventional long-distance traffic, a position that, in Qwest's view, is inconsistent with existing Commission policy. So long as the access charge regime persists in anything like its current form, however, disputes concerning the scope of the exemption will assume extraordinary importance as the technology for delivering interexchange voice calls through Internet protocol ("IP") becomes more and more efficient. To ensure technological neutrality in this setting, the Commission could either repeal the access charge exemption but do nothing else or it could eliminate the access charge regime to which the exemption applies. Because that regime is itself fatally flawed for the reasons discussed elsewhere in these comments, Qwest supports the latter option.

The arbitrage issues raised by Internet telephony and those raised by intercarrier compensation for ISP-bound traffic may differ in a number of respects, but they share two principal characteristics. First, they reveal that the multiplicity of compensation schemes for different classes of traffic enormously complicate predictions about the regulatory obligations of any given carrier with respect to any other carrier. Second, and more generally, they both point

¹⁰ See generally Federal-State Joint Board on Universal Service, Report to Congress, 13 FCC Rcd 11501 (1998) ("1998 Report to Congress").

to the disconcertingly prominent role that regulation has assumed in shaping the business plans that define the present and future course of this industry.

The ultimate shape of the telecommunications world should not turn on the outcome of such academic regulatory disputes as whether a LEC-to-CLEC handoff of ISP-bound traffic is more "like" an ordinary exchange of local traffic or more "like" the cooperation of two LECs in the origination and termination of conventional interexchange traffic. Nor should it turn on the fine points of distinction between "computer-to-computer" versus "phone-to-phone" IP telephony. *See 1998 Report to Congress*, 13 FCC Rcd at 11543-44 ¶ 87-88. The Commission should drain such disputes of their principal significance – and eliminate the anticompetitive uncertainty that they have sown – simply by adopting bill-and-keep as the single compensation rule for the hand-off of all traffic over the public switched network for any traffic that touches that network.¹¹

Finally, although the Commission had once expressed concern that bill-and-keep would create inefficient incentives for carriers to specialize in *originating* traffic, it has since suggested that this concern may have been somewhat overstated. As it now observes, "[a] carrier must provide originating switching functions and must recover the costs of those functions from the originating end-user, not from other carriers. Originating traffic thus lacks the same opportunity for cost-shifting that reciprocal compensation provides with respect to serving customers with

The Commission has not sought comment on intercarrier compensation for any hand-off of information service traffic to an Internet backbone. *Cf. NPRM* ¶ 2. In the backbone context, compensation issues have worked themselves out without any government involvement at all: no backbone provider is dominant; "peers" drop traffic off to other peers at the closest point of interconnection; and although non-peers must typically pay for transport and termination services from other backbone providers, those services are typically quite competitive. *See generally* Michael Kende, "The Digital Handshake: Connecting Internet Backbones," OPP Working Paper #32 (2000).

disproportionately incoming traffic." *ISP Reciprocal Compensation Order* ¶ 73. Of course, it is always hazardous to predict that any given regulatory regime, even a minimalist one such as bill-and-keep, will produce no regulatory anomalies. But we fully agree with the Commission that bill-and-keep is far less likely to produce such anomalies than the CPNP regime has already been shown to produce.

D. Bill-and-keep is at least as consistent as CPNP with principles of cost causation.

Supporters of the existing CPNP approach claim that bill-and-keep is inefficient because it does not place all the costs of a call on the party that initiates the call. Although bill-and-keep is not a perfect cost-allocation scheme, it is nonetheless at least as efficient, and perhaps more so, than CPNP in this respect.

In any call, both the calling party and the called party make choices that result in the accrual of costs. A calling party chooses to place a call and, at every moment during the call, chooses whether to allow it to continue. The called party chooses whether to accept the call and also chooses, at each point after the first moment, whether to maintain the connection. (To be sure, as discussed below, the terminating carrier typically has no control over whether it incurs call set-up costs; it is in that respect at the mercy of the calling party.) For its part, the terminating carrier makes investment choices that determine the efficiency of its network architecture and termination technology, and those choices also affect the level of costs associated with the receipt of a call.

Under the CPNP regime, the called party and its carrier bear none of the costs of the call, even though each is in a position to reduce those costs (the called party by hanging up sooner, and the terminating carrier by cutting termination costs). That approach is inherently inefficient: because both the called party and its carrier are able to reduce the costs incurred in a call, they

should bear some responsibility for paying those costs. Indeed, at least in theory, the CPNP regime could deter many calls from being made even when the aggregate benefits of a call to both parties exceed any usage-sensitive costs of the call, at least where the two parties have no independent business relationship and the originating party has no firm expectation that the called party will reciprocate in the future with an all-expenses-paid call of his own. For example, if the cost of an interexchange call (or a local call billed on a usage-sensitive basis) is 3, and each party to the call would derive from it a benefit of 2, the call *should* be made from an efficiency perspective, but is *unlikely* to be made unless its costs can be spread out to each party that benefits from it.

For these reasons alone, a bill-and-keep scheme is as efficient as any CPNP approach. It gives calling parties appropriate incentives to make efficient calls that would not otherwise be made; it gives called parties appropriate incentives to end calls earlier if their continuation would be inefficient; and it places greater obligations on each carrier to internalize the costs of its network, thereby inducing each carrier to ensure that it employs efficient termination technology. Bill-and-keep may not embody the perfectly efficient solution to the problem of cost causation: the share of costs a called party may appropriately be said to "cause" is a complex issue, and the "true" share (however defined) may well be different from the share that the called party would be expected to bear under any particular version of bill-and-keep. But, at

Of course, even under a CPNP regime, carriers will have a substantial incentive to reduce their termination costs, because (1) regulated termination rates tend not to be based on the actual termination costs of any given carrier other than the incumbent LEC, and (2) many calls will require a carrier to internalize termination costs no matter what the intercarrier compensation scheme, because those calls will have *originated* on the terminating carrier's network as well. Nonetheless, at the margin, bill-and-keep does present some additional incentive beyond what CPNP would provide to ensure efficiency in termination.

a minimum, the solution bill-and-keep prescribes to the cost causation problem is no more arbitrary than the solution prescribed under the CPNP approach.

II. The Question of Transport Requires Considerable Analysis and Deliberation.

Under any bill-and-keep regime, a carrier would be expected to provide its own terminating switches and loops and, as a general matter, would be precluded from recovering the costs of those facilities from originating carriers. There remains the problem of assigning responsibility for providing the transport necessary to ensure physical interconnection between the networks of two carriers. As discussed below, the transport question is sufficiently complex that the Commission should seek extensive comment before settling upon any definitive answer. But that should not deter the Commission from (1) acting now in adopting bill-and-keep, in principle, as its intercarrier compensation rule and (2) sharpening the additional inquiry into the transport question by identifying the key characteristics, discussed below, of an optimal transport default rule.

A. The concept of POIs.

One central concept in any discussion of transport is the "point of interconnection," or "POI." It is important to distinguish between two related but distinct uses of the term "POI." A *physical* POI is the place where two networks actually interconnect. For example, the POI between a LEC and an IXC is typically the latter's "point of presence" (or "POP") at the edge of the former's network. And, "for the transmission and routing of telephone exchange service and exchange access," an incumbent LEC must provide physical interconnection to "any requesting telecommunications carrier," including any CLEC or CMRS provider, at "any technically feasible point within" the incumbent's network. 47 U.S.C. § 251(c)(2).

A *financial* POI is the demarcation point signifying where one carrier's responsibility to cover the costs of a call begins and the other carrier's responsibility ends. That financial POI may or may not coincide with the physical POI. For example, the physical POI between a LEC and an IXC is the POP, but, under the current access charge regime, the IXC bears financial responsibility to the LECs on either side of an interexchange call for the costs of originating, transporting, and terminating the call from one end user to another; the relevant financial POIs are thus, in effect, the location of those end users (or, more precisely, points somewhere between the end users and their central office switches, depending on the applicable access charge rules). Similarly, although CLECs or CMRS providers may generally demand physical interconnection under section 251(c)(2) "at any technically feasible point" within an incumbent LEC's network, the financial POI under CPNP is often far removed from that point, since an originating carrier must cover the transport and termination costs of the terminating carrier. By contrast, the financial POI for adjacent, non-competing incumbent LECs often does coincide with the location of the relevant physical POI.

This description of physical and financial POIs provides an important, alternative way to conceptualize how bill-and-keep operates in practice. In essence, a bill-and-keep regime is an approach to intercarrier compensation that, among other things, establishes a *financial* POI between two carriers at some point between the originating carrier's network and the terminating carrier's central office, irrespective of the *physical* POI that those carriers might ultimately choose. For example, under the default rule proposed by DeGraba (discussed in more detail below), a carrier would have financial responsibility for delivering a call to the terminating carrier's central office, but it may well choose to purchase transport from the terminating carrier for a portion of the way. In those circumstances, the physical POI could fall in any number of

places between the two carriers' networks, but the financial POI (under the default rule) would remain the terminating carrier's central office. In that sense, what DeGraba proposes is a relatively limited form of bill-and-keep; a more comprehensive form might move the financial POI closer to the edge of the terminating carrier's network.

One central objective of the current proceeding is to define a technology-neutral rule for the financial POI that would be applicable to any hand-off of telecommunications on the public switched network, irrespective of legacy regulation. As discussed more fully below, such a rule would be most efficient if, among other things, it allowed financial POIs to coincide with workable physical POIs in as many circumstances as possible — or, to put the same point another way, if it prescribed a default rule for transport responsibility that, without any need for further negotiation, produced a non-wasteful transport outcome in the majority of cases. Such a rule would permit carriers to get on with their business immediately; only later would they need to engage, at their option, in the time-consuming exercise of negotiating ways to reach even more efficient solutions to their individualized problems than the one prescribed by the default rule. To the extent, however, that this approach would permit an originating carrier to relinquish responsibility for transport at the edge of the terminating carrier's network, it would present significant practical concerns that the Commission should carefully consider, as discussed below.

B. The DeGraba and Atkinson/Barnekov proposals.

The NPRM describes two alternative solutions to the transport problem. First, under the DeGraba proposal for "central office bill-and-keep" ("COBAK"), the originating carrier in a two-carrier call would bear total responsibility for delivering a call to the terminating carrier's

end office, thereby inducing each carrier to employ efficient switching technology. ¹³ If there is no competitive market for such transport, then, under DeGraba's proposal, the rates that the terminating carrier may charge the originating carrier would be subject to regulation. *See* DeGraba ¶ 120-21. In a three-carrier call involving an intermediate carrier (such as an IXC) with which the caller has an independent contractual relationship, the originating carrier would bear responsibility for delivering the call to the point of presence of the IXC, and the IXC would then be responsible for delivering the call to the terminating carrier's end office. *See id.* ¶ 23-30. Whether a particular call should be treated as a two-carrier or a three-carrier call for these purposes ultimately turns on whether any intermediate carrier has an independent contractual relationship with, and thus the ability to recover transport costs from, the calling party. ¹⁴

¹³ Depending on the Commission's ultimate solution to the question of transport, the terminating access problem discussed in section I(A) above may persist in somewhat attenuated form in light of the terminating carrier's "bottleneck control over the trunk port at the central office." *NPRM* ¶ 53. If the DeGraba proposal were accepted in its entirety – a course that Qwest does not recommend – it might need to be supplemented with an additional rule permitting access to the trunk port at non-monopolistic rates.

¹⁴ In the *NPRM*, the Commission attributed to Qwest the suggestion that "a bill-and-keep arrangement does not work when three carriers are involved in the transport and termination of traffic, because the middle carrier that transports the traffic from one LEC to the other does not really have a 'customer' involved in the call from which it can recover costs." NPRM ¶ 71. Three-carrier scenarios fall into two categories: those in which the end user has an independent relationship with the intermediate carrier (such as an IXC), and those in which it does not. Where the end user does have an independent relationship with the intermediate carrier, the sole obligation of the originating carrier under bill-and-keep is to transport the call to a point of interconnection with that intermediate carrier, which must terminate the call to the third carrier and recover its own transport costs from the end user. In contrast, the concern identified by Owest and addressed by the Commission arises only with respect to the second category of three-carrier scenarios, in which the end user *lacks* an independent relationship with the intermediate carrier. In a typical example, a "transiting" LEC provides transport functions for the originating carrier without an opportunity to recover the costs of those functions from any relevant end user customer. In that context, a sensible bill-and-keep approach, such as DeGraba's, would treat this as a two-carrier call: it would require the originating carrier to ensure transport – through one means or another – to some point of interconnection with the

Under the Atkinson/Barnekov proposal, interconnecting carriers would evenly split the costs "solely incremental to interconnection." The Atkinson/Barnekov paper itself (at ¶¶ 71 and 72) leaves it somewhat unclear whether the interconnection costs to be split evenly would include the cost of transport outside of a local calling area. Also, even though their paper does not itself say so, the Atkinson/Barnekov proposal for splitting costs has led some to suggest that, when carriers disagree about the proper designation of the transport facilities for which they both must pay, they would routinely seek regulatory intervention to resolve the dispute. Indeed, in the absence of additional clarification, it is difficult to see how implementation of this cost-sharing approach could proceed without either a cumbersome bidding process or some other form of substantial regulatory oversight.

All other things being equal, the DeGraba proposal appears more likely than the Atkinson/Barnekov alternative to avoid unnecessary regulation, and many of the comparative benefits of the DeGraba proposal are simply the product of avoiding the regulatory indeterminacy that would arise under the Atkinson/Barnekov framework, at least as we understand it. Under that latter framework, as DeGraba observes, "if one network wanted to interconnect at a single point, while the second carrier wanted to interconnect at multiple points, it is not clear how an arbitrator would decide this issue." DeGraba ¶ 69. Similarly, it would be exceedingly difficult, in practice, for regulators to identify the costs that are properly designated as the "incremental cost[s] of transport." See id. In contrast, the DeGraba default rule would lead to private negotiations that could produce efficient interconnection arrangements: Where

terminating carrier. The originating carrier may choose to provide that transport itself, or it may choose to use the transport services of a transiting carrier. If it chooses the latter option, it must of course pay the transiting carrier for providing those services.

"two networks both originate and terminate traffic, it generally will be in their mutual interest to negotiate a meet-point interconnection arrangement,-since it is generally cheaper to build a single transport trunk than for each individually to construct a separate transport trunk" (the default consequence upon impasse). *Id.* ¶ 73.

One flaw in DeGraba's proposal, however, is that the default outcome it prescribes is a penalty default: i.e., it is explicitly inefficient because it would usually make no sense for each carrier to build its own transport facilities all the way to each other carrier's central office to carry only the traffic it originates, and carriers would therefore be required to negotiate around the rule. (Put another way, the financial POI prescribed by DeGraba's approach would almost never coincide with any sensible physical POI.) Although private negotiations are often better than regulation as a means of resolving difficult problems, the very process of negotiation imposes significant costs, and the optimal default rule would avoid both regulation and negotiations whenever possible. For example, the DeGraba approach might not effectively restrain any incentives carriers have to delay negotiations in various circumstances – or to refuse to engage in them altogether – to the detriment of their competitors.

There are other, related respects as well in which DeGraba's proposal fails to resolve important questions. In particular, while DeGraba gives a sound justification for adopting some clear financial POI – *i.e.*, some clear default rule subjecting an originating carrier to all the costs of transport up to a defined point of interconnection – he provides less justification for designating the terminating carrier's "central office" (or "end office") as that point. Requiring the originating carrier to deliver calls so deeply into the terminating carrier's network may be problematic. Among other concerns, it increases the likelihood that, at some point in the call's path, there may be few transport alternatives outside of the terminating carrier's network, and

that in turn would inevitably lead to calls for regulatory intervention in the rates the terminating carrier may charge for providing that transport. *See generally* DeGraba ¶¶ 120-21. And DeGraba's use of the "central office" as the demarcation point in carrier responsibility for a call would inevitably lead to difficult implementation questions concerning which facilities, in fact, would qualify as central offices, a point that DeGraba himself acknowledges. *See id.* ¶¶ 103-08. The Commission should hesitate before adopting an interconnection rule for the 21st century that incorporates, as a key element, a technological convention of the 20th century.

One imaginable alternative would be "POIBAK" (rather than DeGraba's "COBAK") – a responsibility to deliver traffic only to the *physical* point of interconnection established through any existing POI designation process. That approach would at least have the advantage of familiarity. But because many of the existing physical POIs were never intended to coincide with financial POIs, it is at best unclear thus far whether mechanically designating any existing physical POI as the relevant financial POI would generally produce fair or efficient results. More fundamentally, since the POI designation procedures differ for LEC-to-IXC, LEC-to-CMRS, and LEC-to-LEC traffic, and because they tend to require significant regulatory involvement, there would also be significant questions about whether complete adoption of those procedures here would be consistent with principles of technological neutrality and regulatory non-intervention.

C. The elements of a sensible transport solution.

Although the DeGraba proposal is a useful starting point for further discussion, it does not provide a complete and satisfactory answer to the problem of transport. The Commission should develop a fuller record before adopting any ultimate solution, and it should focus further comment by embracing the following three principles.

First, an optimal solution to the transport problem would reduce, to a bare minimum, any role for regulatory intervention to mediate particular carrier disputes. As DeGraba recognizes, the best way to achieve that goal is to prescribe a clear default rule that requires little case-by-case elaboration. That, as discussed, is the principal advantage of the DeGraba proposal over the Atkinson/Barnekov alternative.

Second, to reduce the need for time-consuming negotiation, the specified default outcome should be not just clear, but also efficient in most cases: it should be an outcome that usually makes sense as an economic and technological matter. It therefore should not be, as in DeGraba's proposal, a penalty default that parties are inevitably required to circumvent through negotiation, with all of its attendant transactions costs, and it also should not be a default outcome that carriers could manipulate simply to impose anticompetitive costs on their rivals.

That goal and the separate goal of reducing regulatory involvement may be in some tension, but they are not in irreconcilable conflict, and harmonizing them is one of the principal challenges of this proceeding.

Finally, any transport solution should preserve appropriate incentives for the development of facilities-based competition in the provision of transport services. The DeGraba version of bill-and-keep would leave a significant role for regulation in determining transport rates, at least where the terminating carrier exercises market power in the provision of transport. See DeGraba ¶ 121. But just as regulation should always be the exception rather than the rule, the Commission should minimize the circumstances in which one carrier's entitlement to another's existing transport facilities at forward-looking cost would deprive the first carrier of an adequate incentive to build facilities of its own. In a growing number of areas, facilities-based providers have built, or have announced plans to build, competitive transport facilities.

Facilities-based competition in the provision of such services should eliminate the need for regulatory intervention. The rules the Commission adopts in this proceeding should be built to last indefinitely, and they should be written on the assumption that facilities-based competition, particularly in the provision of transport, will and should be an increasingly pervasive feature of the telecommunications landscape.

An alternative means of achieving the same objective – reducing regulatory intervention in the provision of transport – is to give an originating carrier some flexibility in deciding for itself where to deliver traffic in the terminating carrier's network; the terminating carrier would then assume full responsibility for transporting the call from that point to its own end office and, ultimately, the called party. (In contrast, under DeGraba's approach, the originating carrier would be responsible for transport deep into the terminating carrier's network – indeed, all the way to the central office serving the called party.) This alternative approach would present a mix of advantages and disadvantages. First, the closer to the edge of the terminating carrier's network the call is dropped off, the less need there will be for regulatory oversight of the transport rates needed to deliver the traffic to its ultimate destination. Similarly, by requiring the terminating carrier to internalize the costs of transporting a larger portion of the call, such an approach may have the desirable consequence of forcing that carrier to optimize the efficiency of its network, and it would reduce the extent to which one carrier could be held captive to another carrier's choice of network architecture. Finally, the less specific an originating or transiting

¹⁵ In some contexts, and under any approach, it might be necessary to require any terminating carrier to locate at least one point of presence in a defined geographic area that it serves (or alternatively to pay for the costs of transport), so as to avoid situations in which the originating carrier must subsidize long-distance transport to a terminating carrier's remote switch simply to complete a truly local call. *See* DeGraba ¶ 111.

carrier's responsibility to transport a call to a defined point within a terminating carrier's network, the less need there will be to resolve such conundrums as whether (under the DeGraba proposal) a particular switching facility constitutes a "central office." *Cf.* DeGraba ¶¶ 103-08.

On the other hand, limiting the originating carrier's transport responsibilities to the edge of the terminating carrier's network could pose significant concerns as well. Without some limiting principle, permitting a carrier to drop a call off *anywhere* in a terminating carrier's network may not be an optimally efficient solution for a typical circuit-switched telecommunications network, in which predictability of transmission paths remains a critical component of network planning. *Cf.* note 11, *supra*. One variation that might help address that concern would be to allow each carrier, for termination purposes, to designate a minimum number of points within a prescribed geographical area at which any other carrier may deliver traffic. For these purposes, the relevant geographical area could be defined on a variety of levels: as a metropolitan statistical area ("MSA"); as a LATA; as a state; or as a multi-state region.

There may be other possibilities as well, and Qwest's goal here is primarily to stimulate further discussion of the transport issue, to which Qwest will return in its future submissions.

Because the questions presented here are extraordinarily complex, the Commission should likewise seek more specific comment, in light of the principles discussed above, on how to design a transport rule that will ensure the development of efficient network architectures driven by 21st century technology rather than by legacy regulation.

III. The Commission Should Lay the Groundwork for Resolving a Number of Implementation Issues Related to the Adoption of Bill-And-Keep.

Under any approach to intercarrier compensation for interexchange calls, network costs will ultimately be borne by end users (in the aggregate). The only questions are (a) whether

those costs will be recovered from end users directly or indirectly, and (b) how much regulatory intervention will distort economically efficient recovery of those costs. The adoption of bill-and-keep for all traffic, including conventional access traffic, would ensure economic efficiency in the long term. But it would also create a need for significant restructuring of end user charges and universal service.

A. The Commission should accompany any move to bill-and-keep with a commitment to flexibility in the regulation of end user charges.

Bill-and-keep would not eliminate the underlying costs traditionally recovered through access charges; it would simply remove the IXC from the picture and require LECs to recover the costs of access directly from end users (rather than, as now, indirectly from end users through the IXC). That approach would present the most immediate advantages in competitive settings, where the rates that carriers charge their end users are unregulated and subject to market pressures. But for bill-and-keep to achieve all that is expected of it, all carriers, including those traditionally subject to regulation as "dominant" carriers, will need greater flexibility in the charges they assess their end users. A switch to bill-and-keep would fail to achieve many of the advantages discussed above if the Commission were simply to retain essentially the current

It is important to recognize that shifting the recovery of these costs from carriers to end users should not, on average, increase the total costs faced by end users. This is so because carriers that currently pay inter-carrier charges, like long-distance carriers, pass these costs on to end-user customers in the form of higher rates. Thus, although a customer may see an increase in the bill he receives from his LEC, he should see a corresponding decrease in other charges, such as lower charges from his long-distance carrier. Of course, to the extent that the existing interconnection regime (and the current geographic averaging requirement for long-distance carriers) involves implicit subsidies, a shift to COBAK may result in some shift in costs among specific groups of consumers, such as raising slightly the costs of customers in high cost areas. Any undue additional

 $^{^{16}}$ As DeGraba observes (at ¶ 125):

access charge rate structure (with all of its inefficiencies) but shift the payment obligation from IXCs to end users. Indeed, if that were the only step-the Commission took, many of the same arbitrage opportunities that exist today would persist: for example, many end users would still choose Internet telephony to avoid, through the ESP exemption, the inefficiently structured perminute access charges associated with the public switched network. And, although it would be approving rates for end users rather than carriers, the Commission would still have to fit the square peg of per-minute access charges into the round hole of the way transport and termination costs are actually incurred.

The solution to this problem is to permit all carriers, including dominant carriers, to design menus of different retail rate options from which their customers may choose. We are not suggesting that, where customers lack choices, dominant carriers should be freed from all regulatory oversight in their assessment of end user charges. We are, however, contending that the current rate structure for the recovery of access-related costs inaccurately represents the ways that those costs are actually incurred — and that it is never optimal, even where rate regulation is required, for regulators to pick any one rate structure to straitjacket an entire class of services. The best evidence of an efficient solution to the problem of cost recovery comes from industry segments in which end user rates are not heavily regulated, such as wireless or long-distance. In those settings, carriers tend to offer their end users not one rate plan but choices among a number of different price structure options, ranging from plans featuring minimal flat fees and significant

burden, however, should be able to be addressed through targeted universal service or other support.

¹⁷ Of course, Qwest and other carriers would need a reasonable implementation period after any Commission order in which to establish the recording, billing, and other back office changes necessary to implement the new rate plans.

per-minute charges to plans featuring higher flat fees combined with large buckets of free minutes. There is no reason why, while maintaining-an appropriate oversight role, the Commission could not afford LECs similar flexibility in recovering from end users (under bill-and-keep) the network costs that LECs now recover from IXCs.

While rate structure flexibility is a necessary condition for a truly rational intercarrier compensation scheme, it is by no means a sufficient one; the adoption of bill-and-keep is independently necessary as well, for the reasons addressed in Section I above. It is worth adding that, for reasons related to those just discussed, section 254(g) itself provides another important reason why bill-and-keep would create the most efficient means of recovering the costs of interexchange calls. As noted, section 254(g) requires IXCs to average their rates among their entire subscriber base. Thus, *under the access charge regime*, that provision creates an implicit and economically inefficient cross-subsidy running from end users in low cost areas to those in high cost areas, because the LECs in the latter areas must impose high access charges on IXCs, which the IXCs must then recover nationwide. By shifting payment obligations from IXCs to end users, bill-and-keep would remove the costs of access from the scope of that national averaging requirement and would therefore permit a more efficient allocation of those costs to the specific end users that cause them.

Finally, it also bears emphasis that, in the long term, there will be more competition, fewer dominant carriers, and thus fewer contexts in which regulators will *need* to regulate retail rates *at all*. That is particularly so in this era of convergence, in which telephone companies, cable operators, and wireless providers (to name a few) have entered into increasing competition for the provision of substitutable services to end users. Where consumer choices have eliminated the need for retail rate regulation, a shift to bill-and-keep would mean *no* role for regulation

(with respect to termination costs), whereas retention of CPNP or the conventional access charge regime would mean a significant *continued* role for regulation (because someone would have to devise an intercarrier cost recovery plan for termination costs). This Commission stands on the threshold of a new century, and it is now writing the rules that will apply decades into the future. Bill-and-keep is the ideal regime for that increasingly competitive, and increasingly deregulated, world.

B. The Commission should accompany any move to bill-and-keep with appropriate adjustments to universal service mechanisms.

As discussed, access charges are a mechanism for recovering from end users indirectly (through their IXCs) certain network costs that LECs would otherwise need to collect from them directly. Bill-and-keep would remove the IXC from this money flow, with two consequences. *First*, the rates IXCs charge end users would likely drop significantly, because competitive pressures would drive an IXC's rates down towards its costs, and because, once access charges are eliminated, those costs would generally consist only of the internal costs of the IXC's network and any applicable transport costs. *Second*, LECs would need to raise end user charges to ensure adequate cost recovery. Any replacement of access charges with assessments on end users would lead to elimination of some cross-subsidies and, in some cases, to a need to replace those cross-subsidies with explicit universal support mechanisms.

¹⁸ As a definitional matter, these increases would not strictly be increases to the "subscriber *line* charge," because the charges at issue would relate not specifically to the loop (*i.e.*, the "line"), but to such functions as switching, the costs for which have often been viewed as usagesensitive, albeit lumpy. Of course, so long as LECs are regulated as dominant carriers, they are entitled to at least a constitutionally compensatory rate of return, and that fact alone would require a new cost-recovery mechanism to make up for the elimination of access charges.

That need derives in particular from the present operation, under the conventional access charge regime, of section 254(g), which, as previously noted, provides "that the rates charged by [IXCs] to subscribers in rural and high cost areas shall be no higher than the rates charged by each such provider to its subscribers in urban areas." 47 U.S.C. § 254(g). IXCs typically pay higher-than-average access charges to LECs that exclusively serve sparsely populated areas, because the network costs of the LECs in serving those areas are in fact high. Under section 254(g), the IXCs must spread recovery of those high charges across their national subscriber base; they may not pass them back specifically to the callers who make and receive the high-cost calls. If access charges were eliminated, IXCs would no longer need to recover those charges at all, and end users in high-cost areas would be required to bear much greater responsibility for these increased costs on their own. As a result, there may be a need for targeted increases in the level of universal service funding to help subsidize basic telephone service for those end users whose aggregate (local plus interexchange) telephone rates have dramatically increased as a result of a switch to bill-and-keep. See generally DeGraba ¶ 125.

Current law provides that "[c]onsumers in all regions of the Nation, including . . . those in rural, insular, and high cost areas, should have access to telecommunications and information services, including interexchange services and advanced telecommunications and information services . . . that are available at rates that are reasonably comparable to rates charged for similar services in urban areas." 47 U.S.C. 254(b)(3). Although the Commission has recently focused on subsidizing services to end users to cover *costs* that exceed a designated benchmark, there is no sound basis for using federal support mechanisms to underwrite any service to high cost users unless their overall *rates* would also exceed an appropriate benchmark. Because, however, the Commission will need to examine these and other issues on remand from the Tenth Circuit's

recent decision in *Qwest Corp. v. FCC*, Nos. 99-9546, 99-9547, 00-9505, 2001 WL 864222 (10th Cir. July 31, 2001), we defer until then a fuller-exposition of the relationship between a move to bill-and-keep on the one hand and state and federal universal service programs on the other. The Commission should of course coordinate the two proceedings to ensure that the concerns raised in one are taken into account in the other.

Any need for increased universal service subsidies for high-cost areas would trigger a related need to revisit the *contribution* mechanisms that underlie the federal subsidy programs. In particular, any expansion of federal universal service subsidies should be accompanied by a commensurate expansion in the class of entities that contribute to the federal subsidy mechanisms. It is economically irrational to impose on "telecommunications carriers" alone the burden of contributing to a fund that may, in turn, be used to subsidize a wide variety of services that *use* telecommunications but may not qualify as *telecommunications services* under the statutory definition.¹⁹ The Commission has broad discretion to extend federal contribution obligations not just to providers of "interstate telecommunications *services*," but also to "[a]ny other provider of interstate *telecommunications*." 47 U.S.C. § 254(d) (emphasis added).

As the Fourth and Ninth Circuits have held, the provision of cable modem service includes an essential "telecommunications" component, whether or not the finished service is appropriately characterized as a "telecommunications service." And, because cable modem

¹⁹ See 47 U.S.C. § 254(b)(3); compare 47 U.S.C. § 153(43) (defining "telecommunications") with 47 U.S.C. § 153(46) (defining "telecommunications service").

²⁰ See MediaOne Group Inc. v. County of Henrico, Nos. 00-1680, 00-1709, 00-1719, 2001 WL 788864 (4th Cir. July 11, 2001); AT&T v. Portland, 216 F.3d 871 (9th Cir. 2000); see also Brief of the FCC as Amicus Curiae at 19, MediaOne, supra (No. 00-1680 et al.) ("the challenged ordinance [mandating 'open access' for cable modem service] requires MediaOne to provide 'telecommunications facilities' – facilities that ISPs would use solely for purposes of

service is an economic substitute for digital subscriber line ("DSL") services, and because DSL revenues add to a LEC's contribution obligations, insulating cable modem service from similar obligations contradicts principles of technological neutrality. Likewise, to the extent that ISPs provide telecommunications as part of their provision of information services, the Commission should consider whether they too should bear an appropriate share of universal service obligations. These issues — the distinction between "telecommunications" and "telecommunications services" and the relevance of that distinction in allocating responsibility for funding federal universal service mechanisms — present some of the most difficult problems facing the Commission today, and the Commission should seek further comment on them. Of course, the Commission need not await the final resolution of this proceeding before alleviating the current anomalies in the way federal universal service programs are funded.

Although adjusting the contribution mechanisms would remove some of the obvious competitive inequalities of the day, the basic long-term dilemma would persist: regulation cannot keep pace with the evolution of technologies and services to ensure permanent competitive neutrality in the design of contribution mechanisms. At bottom, the only way to eradicate that dilemma at its source is to revisit first principles. It is widely understood that, from an economic efficiency perspective, it is less sensible to derive universal service

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transmission or 'telecommunications'"). The Commission has sought further comment on these issues in its pending *Inquiry Concerning High-Speed Access to the Internet Over Cable and Other Facilities*, Notice of Inquiry, 15 FCC Rcd 19287, 19294-96 ¶¶ 18-20 (2000).

²¹ See generally Implementation of the Non-Accounting Safeguards of Section 271 and 272 of the Communications Act of 1934 as amended, Order on Remand, CC Docket No. 96-149, FCC 01-140 (rel. Apr. 27, 2001) ¶¶ 38-39.

contributions from telecommunications-related revenues than from general tax revenues.²² And there is no apparent reason why, in this respect, public funding for the nation's telecommunications needs should be treated differently from funding for such other public goods as streets and highways. Although that is an issue that must ultimately be taken up by Congress, and although its resolution is obviously separable from the questions presented in this proceeding, complete regulatory rationality in this industry may never be achieved until this most fundamental anomaly is uprooted.

C. The Commission should allow market forces to deal with the problem of "unwanted calls."

As discussed above, the premises of bill-and-keep are, among others, (1) that both parties to a call are free to end it at any point; (2) that each party thus "causes" some portion of the cost of the call past the first instant of connection; and (3) that each should therefore bear a portion of the call's costs. It may be unavoidable, however, that carriers will end up incurring call set-up costs for some unwanted calls even if the called party hangs up as soon as the call is placed. That is the case whether or not the called party is exempted from any retail charge for the first minute of a call; even if so, the terminating carrier must absorb the cost and will presumably pass it on to all customers in the form of slightly higher rates. *Cf.* DeGraba ¶ 118.

It is unclear that this will be a significant problem in practice. Even under bill-and-keep, originating carriers must bear a substantial portion of the costs of a call; efficient originating callers will thus often have adequate incentives not to let unwanted calls proliferate. In any

²² See, e.g., Jerry Hausman & Howard Shelanski, *Economic Welfare and Telecommunications Regulation: The E-Rate Policy for Universal-Service Subsidies*, 16 Yale J. on Reg. 19, 30 (1999) ("[t]he alternative of subsidizing universal services through general tax revenues" is "a good option from the standpoint of efficient public finance").

event, to the extent that there is concern about non-trivial termination costs for certain kinds of unwanted calls (such as telemarketing calls), carriers have already devised some mechanisms (such as caller identification, privacy messages, and non-solicitation messages) that are effective in screening calls in certain circumstances, and more technologies might be deployed in the future to block additional categories of calls until after the called party has specifically authorized their transmission. In sum, there is no reason for regulatory concern about this set of issues at this point, and, if any such concern arises later, it can be addressed then.²³

IV. The Commission Has Legal Authority To Impose Bill-and-Keep.

As shown above, sound public policy supports the adoption of bill-and-keep as the unifying intercarrier compensation scheme for all traffic over the public switched network. The Commission has also sought comment on whether it has *legal authority* to impose bill-and-keep across the board. Two central questions govern that issue. *First*, does the Commission have *jurisdiction* to promulgate *any* rules to address a given class of traffic – either (1) because the traffic falls within the scope of section 251(b)(5), which the Commission has jurisdiction to implement in light of the Supreme Court's decision in *AT&T v. Iowa Utils. Bd.*, 525 U.S. 366

As DeGraba discusses, bill-and-keep would not "entirely eliminate the incentive for a business that only receives calls to claim to be a network," because the business could then "avoid having to pay a subscription fee (*i.e.*, purchase business service from the interconnecting carrier)." DeGraba ¶ 115. For that reason, DeGraba aptly observes that a business claiming to be a network should be entitled to the rule prohibiting the originating carrier from charging for interconnection only if that business "exhibits characteristics of a network, such as ownership of a switch" and "interconnecti[on] with the incumbent's signaling system." DeGraba ¶¶ 115-116. For these purposes, regulators would need to distinguish between true "switches" (comparable in complexity and functionality to switches owned by even the smallest carriers) and private branch exchanges ("PBXs"), which are owned by most large non-carrier businesses. In any event, no matter how this "sham network" problem is resolved, bill-and-keep would mark at least an incremental improvement over the CPNP regime, in which a "sham" carrier not only avoids subscription charges but also *receives money* from the originating carrier.

(1999), or (2) because the traffic falls within the scope of the FCC's general interstate regulatory authority under section 201? And, *second*, is bill-and-keep consistent with the *substantive* requirements of the Communications Act, including, with respect to traffic covered by section 251(b)(5), the accompanying pricing standards of section 252(d)(2)?

With respect to most telecommunications traffic, the answer to both of these questions is yes. Although it is unclear whether the Commission has authority to impose bill-and-keep for conventional *intrastate* access traffic, that uncertainty should not deter the Commission from imposing bill-and-keep to the limits of its jurisdictional authority.

A. The Commission has authority to impose bill-and-keep for traffic falling within section 251(b)(5).

The Commission has determined that, when viewed in combination with section 251(g), the "reciprocal compensation" provision of section 251(b)(5) is properly construed to apply to all telecommunications traffic involving at least one LEC except "access" traffic (including "information access"). See ISP Reciprocal Compensation Order ¶¶ 34-41; Local Competition Order, 11 FCC Rcd at 15997 ¶ 1008. Thus, section 251(b)(5) covers most non-ISP-bound LEC-to-LEC and most LEC-to-CMRS traffic, including paging traffic. See, e.g., Local Competition Order, 11 FCC Rcd at 15997 ¶ 1008. Over time, as the FCC exercises its authority to "supersede[] by regulation[]" the grandfathering provisions of section 251(g), the class of traffic subject to section 251(b)(5) may increase in size.²⁴

²⁴ Section 251(g) preserves the pre-1996 Act regulatory status quo with respect to the matters included within its scope until the grandfathered rules "are explicitly superseded by regulations prescribed by the Commission." In theory, therefore, if a class of traffic is properly deemed to fall both within the scope of section 251(b)(5) and within the class of grandfathered regulations under section 251(g), that traffic would be subject to the substantive standards of section 251(b)(5) if, and only if, the Commission specifically determines, through superseding

The "reciprocal compensation" obligation of section 251(b)(5) is fleshed out in section 252(d)(2). Section 252(d)(2)(A) provides:

For the purposes of compliance by an incumbent local exchange carrier with section 251(b)(5) of this title, a State commission shall not consider the terms and conditions for reciprocal compensation to be just and reasonable unless – (i) [they] . . . provide for the mutual and reciprocal recovery by each carrier of costs associated with the transport and termination on each carrier's network facilities of calls that originate on the network facilities of the other carrier; and (ii) [they] . . . determine such costs on the basis of a reasonable approximation of the additional costs of terminating such calls.

Section 252(d)(2)(B) further provides, however, that section 252(d)(2)(A) "shall not be construed . . . to preclude arrangements that afford the mutual recovery of costs through the offsetting of reciprocal obligations, including arrangements that waive mutual recovery (such as bill-and-keep arrangements)."

In the *Local Competition Order*, the FCC construed section 252(d)(2) to permit bill-and-keep for balanced traffic but not for unbalanced traffic. *See* 11 FCC Rcd at 16055 ¶ 1112. The Commission should now revisit and reverse that conclusion. First, as discussed above, the Commission has *already* rejected its stated policy basis for limiting bill-and-keep to balanced traffic: *i.e.*, the concern that, absent such a limitation, carriers would have artificial incentives only to originate traffic. *See ISP Reciprocal Compensation Order* ¶¶ 72-73. Second, the Commission provided no substantial legal analysis to support its suggestion that the statute prohibits bill-and-keep for unbalanced traffic: it simply assumed, without explaining why, that section 252(d)(2) is satisfied only when an originating carrier pays money to cover the transport and termination costs of another carrier whenever the traffic between the two is asymmetrical.

regulations, that it should be subject to those standards. See generally ISP Reciprocal Compensation Order \P 40; but cf. id. \P 37 n.66.

See Local Competition Order, 11 FCC Rcd at 16055 ¶ 1112. As we now discuss, the statute, while highly ambiguous on this point, can reasonably be, and should be, read *not* to contain such a prohibition.

As an initial matter, section 252(d)(2)(A), even read apart from the bill-and-keep savings clause in section 252(d)(2)(B), uses a specialized term to describe what an originating carrier must pay the terminating carrier for transport and termination costs: "a reasonable approximation of the *additional costs* of terminating such calls" (*i.e.*, calls that the originating carrier delivers to the terminating carrier's customers). 47 U.S.C. § 252(d)(2)(ii) (emphasis added). In this context, the term "additional costs," which appears nowhere else in sections 251 and 252, could reasonably be construed to include only the short-run (per-call) incremental costs of delivering traffic to the called party. *Those* costs may well be negligible, because, as discussed above, individual calls do not typically "cause" transport and termination costs; those costs consist instead of the lumpy investments needed to ensure peak load capacity. For that reason alone, bill-and-keep proposals such as DeGraba's, which effectively set the termination rate at zero, are consistent with section 252(d)(2).

In any event, irrespective of what section 252(d)(2)(A) might be construed to mean in isolation, the bill-and-keep savings clause of section 252(d)(2)(B) makes clear that nothing in the statute precludes the Commission's discretion to impose bill-and-keep for any class of traffic within its jurisdiction. That savings clause provides that section 252(d)(2)(A) "shall not be construed . . . to preclude arrangements that afford the mutual recovery of costs through the offsetting of reciprocal obligations, including arrangements that waive mutual recovery (such as bill-and-keep arrangements)." (Emphasis added.) While this language is unclear in some respects, it could not be plainer in preserving, at a minimum, "arrangements that waive mutual

recovery (such as bill-and-keep arrangements)." Nothing in that savings clause is limited to balanced traffic, a point that the Commission essentially overlooked in 1996.²⁵

Read in combination, subparagraphs (A) and (B) of section 252(d)(2) thus provide a *choice* of intercarrier compensation methodologies as the default option for intercarrier compensation: *either*, under subparagraph (B), a bill-and-keep arrangement that "waive[s] mutual recovery" as between carriers *or*, under subparagraph (A), any CPNP arrangement under which an originating carrier compensates a terminating carrier for the true "additional costs" of terminating individual calls, whatever that term may be construed to signify. Viewed together, what these two provisions indisputably foreclose is any nonconsensual arrangement – common before passage of the 1996 Act (*see, e.g., Local Competition Order*, 11 FCC Rcd at 16010-11 ¶ 1030) – in which one carrier forces another to pay charges for transport and termination that are not in fact limited to the costs of providing those services, or in which an *originating* carrier (such as a LEC) charges a *terminating* carrier (such as a CMRS provider) for the costs of origination. *See, e.g.,* 47 C.F.R. § 51.703(b).

To be sure, as the Commission itself has recognized, adoption of bill-and-keep for all traffic subject to section 251(b)(5) would mark a significant policy reversal, albeit one for which the Commission has begun laying a foundation. See NPRM ¶¶ 76-77. It is hornbook law that an agency is permitted to change its mind on both policy matters and on questions of statutory interpretation so long as it gives a reasoned explanation for its change in course. See, e.g., Rust

²⁵ It is noteworthy that bill-and-keep, if imposed for all traffic, would remove most of the arbitrage opportunities that create large categories of unbalanced intercarrier traffic in the first place. For that reason, adoption of bill-and-keep would largely *eliminate* the very class of traffic as to which the Commission once thought the adoption of bill-and-keep would be most legally problematic.

v. Sullivan, 500 U.S. 173, 187 (1991); Chevron U.S.A. Inc. v. Natural Resources Defense Council, Inc., 467 U.S. 837, 862 (1984). For the reasons discussed, the Commission has more than an adequate basis for rejecting its perfunctory – and already partially repudiated – rationale for precluding the use of bill-and-keep for unbalanced traffic subject to section 251(b)(5).

LEC-CMRS traffic, the legal status of which the Commission has addressed at some length in the *NPRM* (¶ 78-96), should be treated like any other traffic subject to section 251(b)(5). The Commission has previously subjected LEC-CMRS traffic to regulation under that provision because, although a CMRS provider is presumptively not classified as a "LEC," see 47 U.S.C. § 153(26), the Commission has construed section 251(b)(5) to apply to any local traffic that involves at least one LEC. See Local Competition Order, 11 FCC Rcd at 15997, 16016-17 ¶ 1008, 1043. The upshot of that determination is that the FCC has rulemaking authority to determine the appropriate methodological treatment of intercarrier compensation for that traffic no less than any other traffic included within the scope of section 251(b)(5). See Iowa Utils Bd., 525 U.S. at 377-81. Since, for the reasons just discussed, bill-and-keep is appropriate for section 251(b)(5) traffic generally, it is appropriate for LEC-CMRS traffic in particular.

B. The Commission has authority to impose bill-and-keep for interstate access traffic.

1. Conventional interstate access traffic

The Commission indisputably has jurisdiction to set intercarrier rates for conventional interstate access traffic. Nothing in the Communications Act poses any substantive obstacle to the adoption of bill-and-keep (e.g., some variant of the DeGraba proposal for "calls involving three carriers") for such traffic. Of course, as in all other contexts, the Commission would need to justify that policy change with a reasoned explanation. As discussed above, however, such an explanation is readily available here.

2. ISP-bound traffic

In the *ISP Reciprocal Compensation Order* (¶¶ 23-65), the Commission has already explained, in great detail, why section 251(g) removes ISP-bound traffic from the scope of section 251(b)(5) and why the Commission may thus regulate it pursuant to its general interstate authority under section 201. Although the Commission's decision to exclude ISP-bound traffic from the scope of section 251(b)(5) is on review in the D.C. Circuit, *WorldCom, Inc. v. FCC*, No. 01-1218 (D.C. Cir. filed May 17, 2001), the decision was correct and should be upheld. Even if the decision is not upheld, moreover, the only consequence would be that such traffic would be subject to section 251(b)(5), not that it would be immune from bill-and-keep. Because bill-and-keep is appropriate for any traffic subject to section 251(b)(5), it would be appropriate for this traffic as well, even if it were deemed to fall within the scope of that provision.

3. Intrastate access traffic

The one class of traffic that the FCC may lack clear jurisdiction to address is intrastate access traffic, and the Commission would encounter similar jurisdictional obstacles if it sought to replace intrastate access charges with an increase in end user rates on the intrastate side of the

cost-recovery ledger. By definition, intrastate access traffic does not fall directly within the scope of the Commission's section 201 authority, and the Commission has previously concluded that it falls outside the scope of section 251(b)(5) as well (even though, as the Commission acknowledges, this latter conclusion may not be compelled by the statutory language). ²⁶

Even if the Commission lacked authority to impose bill-and-keep for intrastate access charges, however, that should not dissuade it from extending bill-and-keep to all other traffic to the fullest extent of its authority. This is an area in which the Commission's leadership is urgently needed, and many states would likely respond to that leadership by imposing bill-and-keep for intrastate access traffic on their own. And, even if they did not, their reluctance to eliminate conventional intrastate access charges would simply induce carriers, for example, to funnel all toll traffic through networks (such as the Internet) in which "the interstate and intrastate components [of the traffic] cannot be reliably separated" – and that are thus deemed categorically subject to the Commission's section 201 authority. *See ISP Reciprocal Compensation Order* ¶ 52. If unaddressed, such arbitrage could dramatically narrow the class of toll traffic subject to state, rather than federal, jurisdiction, potentially leaving incumbent LECs without full recovery of their intrastate costs (because they would lose intrastate access revenues, perhaps without a corresponding increase in their end user rates).²⁷

²⁶ See ISP Reciprocal Compensation Order ¶ 37 n.66 (deeming statute "ambigu[ous]" on this point but reaffirming earlier conclusion that section 251(b)(5) excludes "traffic subject to parallel intrastate access regulations"); see generally Louisiana PSC v. FCC, 476 U.S. 355 (1986) (holding that, under section 2(b), the FCC lacks authority over intrastate rates, subject only to a narrow "impossibility" exception).

²⁷ Similar jurisdictional issues could arise for any class of intrastate traffic – including traffic covered by section 251(b)(5) – as to which carriers would be required to recover from end users the network costs that they used to recover from other carriers. In particular, although the Commission has jurisdiction to regulate *intercarrier* compensation for section 251(b)(5) traffic,

It is exceedingly unlikely that the states would do nothing in response to such arbitrage. More likely, they would follow the Commission's lead in adopting bill-and-keep as a unifying intercarrier compensation rule for all traffic. And this would not be the first time that this Commission has realized that, to eliminate legacy regulation, it must sometimes act first and rely on the resulting dynamics of the free market to restore consistency between state and federal regulation.²⁸

it may lack jurisdiction to raise end user rates on the intrastate side of the ledger to make up for the elimination of intercarrier compensation under bill-and-keep. That fact, combined with the concerns discussed in the text, illustrates why it is important for the Commission to exercise leadership in this area and to persuade the states to adopt compensation mechanisms that accommodate a shift to bill-and-keep as the new paradigm for intercarrier compensation.

²⁸ See, e.g., Federal-State Joint Board on Universal Service, Report and Order, 12 FCC Rcd 8776, 8785-86 ¶ 14 (1997) ("[A]s competition develops, the marketplace itself will identify intrastate implicit universal service support, and . . . states will be compelled by those marketplace forces to move that support to explicit, sustainable mechanisms[.]").

CONCLUSION

The Commission should adopt bill-and-keep-for all traffic to the fullest extent of its jurisdiction, not because bill-and-keep would benefit any one class of carriers, but because the regulatory rationality it would introduce into this industry would benefit *all* carriers and, just as important, the public at large. To be sure, decisive action today may well result in short-term discomfort for some – including, in some respects, Qwest itself. But only comprehensive reform will rationalize the intercarrier compensation regime and realize the Act's goal of a technologically neutral, economically rational playing field for all segments of the telecommunications industry.

Respectfully submitted,

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August 21, 2001

CERTIFICATE OF SERVICE

I, Russell P. Hanser, do hereby certify that on this 21st day of August, 2001, I have caused true and correct copies of the foregoing Comments of Qwest Communications International, Inc., to be served by hand delivery upon the following parties:

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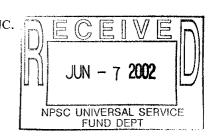
In the Matter of)	
)	
Developing a Unified Intercarrier)	CC Docket No. 01-92
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REPLY COMMENTS OF QWEST COMMUNICATIONS INTERNATIONAL, INC.

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November 5, 2001



EXECUTIVE SUMMARY

Bill-and-keep would permit, and CPNP would preclude, the steady deregulation of the telecommunications industry over the long term. In a nutshell, that is because bill-and-keep requires a carrier to recover from its *end users* costs that CPNP entitles it to recover from *other carriers* – and because, although there will always be a need to regulate the rates that even non-dominant carriers charge other carriers, there is never a need to regulate the rates such carriers charge their own end users. For example, if a non-dominant carrier charges an end user a supracompetitive rate for terminating calls, the market itself will correct the problem, because the carrier will lose the customer to a competitor with lower prices. But if the carrier is allowed to recover the costs of the same service from another carrier serving a different customer, no market mechanism can normally deter the first carrier from charging an arbitrarily high price.

Thus, so long as CPNP is the rule – so long as one carrier may recover its *own* network costs from *another* carrier rather than from its own end users – the only solution to this "terminating access monopoly" is pervasive regulation, even of the smallest upstart carrier. Such regulation is undesirable and, because of bill-and-keep, unnecessary. By requiring carriers to recover their network costs from their own end users rather than from other carriers, bill-and-keep would eliminate any need to regulate non-dominant carriers, because those end users could take their business elsewhere.

Opponents of bill-and-keep, such as AT&T, respond that the deregulatory benefits of bill-and-keep would be limited because the end user rates of ILECs (to the extent they are dominant in given markets) may still require regulation. That argument is unsound on two levels. To begin with, bill-and-keep would permit significant deregulation today, because, among other considerations, non-dominant carriers are already significant

terminators of traffic, as illustrated by the industry's recent experience with ISP-bound traffic and CLEC access charges.

More fundamentally, AT&T's argument on this point is remarkably short-sighted. Because any regime the Commission selects in this proceeding should be built to last, the question is not whether bill-and-keep presents obvious advantages over CPNP today (even though it does), but whether it will present such advantages ten and fifteen and twenty years from now. The answer is yes. As the telecommunications world becomes increasingly defined by intermodal competition, and as it becomes increasingly populated by non-dominant carriers, the choice between CPNP and bill-and-keep is, at bottom, a choice between heavy regulation of this industry and very little at all.

Opponents of bill-and-keep also suggest that the costs of unnecessary regulation are low -- that regulation is, in effect, no less capable than market forces of "getting the rates right." This is sophistry. As illustrated by years of unhappy experience with access charges and reciprocal compensation rates, regulation is unpredictable, destabilizing, and inherently incapable of setting accurate intercarrier rates for the recovery of origination and termination costs. That is why the legacy of such regulation is litigation and pervasive arbitrage. Moreover, unlike bill-and-keep, CPNP would permanently mire the Commission in inappropriate judgment calls about whether one class of carriers has higher or lower network costs than another and, accordingly, whether the intercarrier compensation rates of some carriers should be higher or lower than those of other carriers. Those decisions should be left to the market, as bill-and-keep would permit, and should not be left to regulation, as CPNP would require. No carrier should be forced to

subsidize another carrier's choice of technology or network architecture; such choices should be validated (or not) by the choices made-by each carrier's own end users.

There is no merit to the time-worn argument that CPNP is more faithful than bill-and-keep to economic principles of cost causation. The premise of CPNP is that the calling party "causes" all the costs of a call. That is demonstrably false: for example, the called party "causes" many of those costs by publicly listing its telephone number and agreeing to take a given call, and the called party's network is free to choose more or less efficient terminating technology. By splitting costs between the calling and the called parties, bill-and-keep is thus *at least* as faithful as CPNP to principles of cost causation. As the Commission has already indicated, there is also no basis for concern that bill-and-keep would cause carriers to specialize in originating traffic or that it would increase the volume of unwanted calls. In any event, if unwanted calls were the problem, the answer would be to regulate them directly, as the Commission has already done.

The defining attribute of bill-and-keep is a default division of financial responsibility, at some point between two networks, for the costs of handling traffic that travels over both networks; in the absence of negotiation, each carrier must recover from its end users, and not from other carriers, all network costs on its side of that point. The DeGraba proposal would establish that point at the end office serving the called party and would then rely on negotiations to produce more efficient outcomes. That approach suffers from two significant shortcomings. First, it would give a comparative bargaining advantage to carriers (such as ILECs) that have many end offices to which other carriers (such as CLECs) must bear the financial burden of providing transport. Second, by requiring carriers to obtain transport to points deep within an ILEC's network, the

DeGraba approach would increase calls for regulatory intervention in the use of an ILEC's transport facilities.

To avoid those problems, Qwest proposes an alternative approach, under which a carrier would bear a default financial obligation to deliver traffic to the "edge" of another carrier's network. Designation of the "edge" of a network would vary depending on whether the network is circuit-switched or packet-switched, given the quite different ways such networks operate. The edge of a hierarchical circuit-switched network would be defined as the access tandem serving the called party's end office. In contrast, the "edge" of a packet-switched network would be defined as any technically feasible point, such as a gateway, within a defined geographic area. Because this "edge of the network" approach would sharply limit the number of points to which carriers would bear a default financial responsibility to deliver traffic, it would be more equitable than DeGraba's approach as among carriers, and it would be more likely to produce efficient, negotiated transport solutions, such as the deployment of two-way trunks where justified by traffic volumes. Moreover, by permitting a carrier to relinquish financial responsibility for traffic at the edge of an ILEC's network, it would reduce calls for government intervention in the provision of an ILEC's transport facilities at regulated rates.

There is no merit to the contention that bill-and-keep would increase an ILEC's ability to discriminate against unaffiliated interexchange carriers. The potential for such discrimination is logically independent of the Commission's choice of intercarrier compensation regimes. Under bill-and-keep, as under CPNP, existing safeguards such as 47 U.S.C. § 272(e) would suffice to protect competition in the interexchange market. To remove any doubt on this issue, the Commission should simply clarify that, under bill-

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and-keep, each ILEC must provide its end users with access to unaffiliated IXCs on the same terms, at the same rates, and with the same-quality of service as the access it provides to its own IXC affiliate.

Some commenters oppose bill-and-keep on the ground that, by shifting network costs to end users rather than IXCs, it would reduce the implicit cross-subsidies that smaller ILECs currently receive under the geographic averaging mechanism of 47 U.S.C. § 254(g). That, however, is ultimately just an argument for replacing such cross-subsidies with explicit, competitively neutral funding mechanisms. There is no valid argument for continuing to fund universal service through implicit, competitively skewed subsidy mechanisms based on access charges.

Although the Commission may lack jurisdiction to impose bill-and-keep for intrastate access traffic, the Tenth Circuit's recent universal service decision underscores the Commission's responsibility to give states incentives to adopt appropriate funding mechanisms on the intrastate side of the ledger. For example, the Commission may condition the receipt of federal universal service funding on a state's willingness to remove implicit subsidies from intrastate access charges. Once those subsidies are eliminated, the states would perceive little advantage in retaining the current access charge regime, and a national consensus would likely develop in support of bill-and-keep for all traffic. Finally, there is no merit to suggestions that the 1996 Act precludes bill-and-keep for all traffic falling within the scope of 47 U.S.C. § 251(b)(5). The language of section 252(d)(2) is appropriately understood to permit a choice between *either* bill-and-keep *or* a truly cost-based CPNP regime. The Commission is free to choose the regime that better serves the public interest, and that regime is bill-and-keep.

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Before the Federal Communications Commission Washington, D.C. 20554

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Developing a Unified Intercarrier)	CC Docket No. 01-92
Compensation Regime)	

REPLY COMMENTS OF **QWEST COMMUNICATIONS INTERNATIONAL, INC.**

Qwest Communications International, Inc. ("Qwest") hereby submits these reply comments in the above captioned proceeding.¹

INTRODUCTION

Bill-and-keep requires carriers to recover costs from their end users, whereas CPNP entitles them to recover many of those costs from other carriers.² As competition develops over time, more and more carriers will become non-dominant, and any need to regulate the rates they charge their end users will disappear, because the market itself will drive end user prices towards cost. But an increase in competition would never reduce the need to regulate critical rates that CPNP, unlike bill-and-keep, would entitle one

¹ See In the Matter of Developing a Unified Intercarrier Compensation Regime, Notice of Proposed Rulemaking, CC Docket No. 01-92, FCC 01-132 (rel. Apr. 27, 2001) ("NPRM").

² "Calling party's network pays" ("CPNP") denotes an intercarrier compensation regime in which the calling party's network bears responsibility for all the costs of a call and pays compensation to other carriers involved in the call. As used here, the term is broadly defined to encompass both the current reciprocal compensation scheme for local calls and the traditional access charge regime, under which the calling party's interexchange carrier ("IXC") must compensate the local exchange carriers ("LECs") on either end of a long-distance call. "Bill-and-keep," in contrast, is defined to mean any compensation rule that would preclude a carrier from charging another carrier for any of the costs of its own local access facilities.

carrier to charge another. That, in a nutshell, is why bill-and-keep is preferable to CPNP. Unlike CPNP, it would eliminate the terminating access monopoly without regulation of non-dominant carriers, it would avoid the destabilizing arbitrage opportunities and litigation that inevitably accompany regulated intercarrier rates, and it would emphasize the role of market forces, rather than regulation, in a carrier's efforts to recover its network costs.

Supporters and opponents of bill-and-keep seem to be talking past one another largely because the supporters are approaching the issue from the perspective of the industry over the long term, whereas opponents are focused on the transitory disputes and special interests that tend to characterize a portion of the industry at any fixed point in time. Thus, the parties most opposed to bill-and-keep for LEC-to-LEC traffic are those that have made short-term windfalls by specializing in the termination of traffic at above-cost rates. The parties most opposed to bill-and-keep for access traffic are certain incumbent LECs that have a particular stake in preserving the economically irrational – and ultimately unsustainable – role of access revenues in the funding of universal service. And, more generally, the parties most opposed to bill-and-keep in any setting are carriers such as AT&T that have staked their business plans on the continuation of heavy regulatory intervention in all aspects of the telecommunications industry.

Moreover, although some parties contend that the Commission should continue to have two vastly different regimes for "local" and "long distance" traffic, that anachronistic approach would exacerbate the arbitrage and inefficiency that already beset the telecommunications world. At the end of the day, a call is simply a call, and arbitrage will inevitably thwart any artificial, distance-related distinction among types of calls.

Moreover, as several CLECs observe, the Commission should view with considerable skepticism any suggestion by incumbent LECs that bill-and-keep makes less sense for access traffic than for other kinds of traffic – or that, five years after enactment of section 254, regulators should still postpone the day in which a competitively neutral funding mechanism, rather than the nationwide customer base of conventional IXCs (see 47 U.S.C. § 254(g)), subsidizes network costs in high-cost areas. The Commission should thus simultaneously adopt bill-and-keep for all traffic within its jurisdiction and encourage the states to do the same.

ARGUMENT

- I. Bill-and-keep is preferable to alternative intercarrier compensation schemes, and the policy arguments of its opponents are without basis.
 - A. Bill-and-keep is the best long-run solution to the terminating access monopoly problem.

There are two serious contenders for the role of unified intercarrier compensation scheme in the long run: a "cost-based" CPNP approach, and bill-and-keep. CPNP would require the government to regulate certain intercarrier rates in perpetuity, whether a given carrier is dominant or not. Moreover, because such regulation is necessarily both imperfect and contentious, it would guarantee a world of arbitrage, litigation, and industry instability. Bill-and-keep avoids those problems, and for that reason alone it is the better choice, particularly over the long term.

1. Bill-and-keep is the optimal solution to the terminating access monopoly in an increasingly competitive world.

The first major advantage of bill-and-keep over CPNP derives from the fact that, whereas there would always be an obvious need to regulate the termination rates that non-dominant carriers charge other carriers, there is never a need to regulate the rates

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they charge their end users. Because bill-and-keep would require carriers to recover from *end users* costs that CPNP would entitle them to recover from *other carriers*, bill-and-keep would eliminate the terminating access monopoly with little or no regulation of non-dominant carriers (and potentially, in some contexts, less regulation of dominant carriers as well). In contrast, CPNP would guarantee permanent, heavy regulation of every carrier, whether dominant or not. That advantage is comprehensively discussed in the attached Declaration of William Rogerson ("Rogerson Decl."), at 8-15.

Here it is important to focus on the severity and breadth of the "terminating access monopoly." That term refers not only to the recent efforts by some CLECs to charge IXCs radically above-cost rates for the termination of interexchange traffic, although that is perhaps the most obvious and familiar manifestation of the problem, but more generally to an economic phenomenon that arises whenever two or more carriers must cooperate in the completion of a call. In any given local or long-distance call involving more than one carrier, the terminating carrier typically controls the only line and local switch connecting the called party to the network, and the caller typically lacks any relationship with the terminating carrier. As a result, the terminating carrier has strong incentives to extract as high a payment as possible from the carrier with which the caller does have a relationship, and the caller is normally powerless to do much about it.

That terminating monopoly problem would thus require pervasive rate regulation of a carrier's termination rates *even if* the other carrier were entitled to pass the high costs of termination back, in the form of higher rates, to the particular calling parties that place the calls at issue. *See* Rogerson Decl. 9-12. But the problem is even worse than that, because various regulatory obstacles typically preclude ILECs (for local calls) and IXCs

(for long-distance calls) from passing such costs back to a specific calling party. *See*, *e.g.*, 47 U.S.C. § 254(g). The calling party thus normally lacks any interest in affecting the rates the terminating carrier charges for local or long-distance calls. *See* Rogerson Decl. 9, 12-13.³ Indeed, those same regulatory obstacles deprive a calling party of any incentive to object when a LEC charges an IXC arbitrarily high rates for *origination* as well. *See id.* at 13-14. In short, because the existing regime insulates LECs from any pressure *by their own end users* to lower above-cost intercarrier rates, CPNP does not create the price signals needed to ensure rational correspondence between prices and cost. The Commission has traditionally turned to rate regulation to address that problem: regulation under section 251(b)(5) of transport and termination rates for local traffic, and regulation under section 201 of access charges for interexchange traffic.

Bill-and-keep would eliminate, at the source, the very need for regulation of intercarrier termination charges. Some commenters observe that bill-and-keep would not immediately eliminate the need for regulation of all termination charges, because, until competition develops, dominant carriers may still have the ability and incentive to charge their end users more than the economic cost of the services they provide. *E.g.*, AT&T Comments 17. Even in the short term, that argument misses the key points that CLECs are already significant terminators of traffic; that, where they are, they hold a monopoly over terminating access; and that bill-and-keep would thus dramatically reduce the extent to which this Commission would need to regulate them, since there would be no need to

³ Under CPNP, even if ILECs and IXCs were permitted to pass these costs back to calling parties, it is unlikely that calling parties would be sufficiently motivated by (or even attentive to) inefficiently high termination rates that they would withhold calls to end users of particular carriers and thereby exert indirect pressure on those carriers to lower those rates to efficient levels. See Rogerson Decl. 8-12.

regulate the rates they charge their own end users (as distinguished from the rates they charge other carriers).

The argument for CPNP, and against bill-and-keep, becomes even weaker when analyzed within the long time horizon that this Commission should consider when deciding the best way to bring long-term rationality to the field of intercarrier compensation. The premise of the 1996 Act, and of the Commission's regulatory philosophy as a whole, is that facilities-based competition will succeed over the long term in providing an ever-growing number of consumers with an expanding set of telecommunications alternatives to incumbent LECs. The parties may dispute the details of that inexorable trend, but even today, and even in the residential sector, competition is more widespread than industry pessimists would have this Commission believe. Wireless services, for example, are already available as an alternative to landline telephony for most Americans. "While most wireless customers may not be willing to 'cut the cord' just yet in the sense of canceling their subscription to wireline telephone service, it is indisputable that wireless service has significantly changed the way Americans communicate. . . . For some, wireless service is no longer a complement to wireline service but has become the preferred method of communication."⁴ Moreover, in a world in which cable modem service has leapt out to an early head start over DSL as the predominant broadband technology for residential subscribers (in part because of regulatory disparities), an increasing number of consumers can be expected to choose the

⁴ In the Matter of Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993, Annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile Services, Sixth Report, FCC 01-192 (rel. July 17, 2001), at 32.

cable modem platform as the source for all of their telecommunications needs, including voice telephony.⁵ And, of course, such forms of-intermodal competition merely supplement the statutory rights CLECs enjoy to an ILEC's own network under the 1996 Act.⁶

It is against this backdrop that the Commission should review AT&T's claim (Comments 17) that bill-and-keep would have no effect on the need to regulate termination rates and would simply change (from carriers to end users) the identities of the parties that must pay such rates. As AT&T appears to recognize, its position rests on the premise that competition is futile and that incumbent LECs will retain the same market position in ten, fifteen, or twenty years that they have today. If that premise is false – and all indications are that it is false – the advantages of bill-and-keep over CPNP become dramatically apparent. In a competitive world populated by non-dominant carriers, the choice between bill-and-keep and CPNP is, quite literally, a choice between continued heavy regulation of this industry and very little regulation at all.

⁵ See Remarks of FCC Chairman Michael K. Powell, "Digital Broadband Migration' Part II" (Oct 23, 2001) (http://www.fcc.gov/Speeches/Powell/2001/spmkp109.html), at 3-4 (noting "the real competitive choices that have been introduced through alternate platforms, particularly wireless and cable telephony services," and predicting that "[a] great deal of competition . . . , particularly for residential consumers, will come from other platforms such as cable and wireless systems").

⁶ See Local Telephone Competition: Status as of December 31, 2000 (Industry Analysis Div. May 2001), at 1 (reporting a "29% growth in CLEC market size during the second half of the year 2000") (emphasis added); id. at 2 (reporting that, over the course of the year 2000, the number of UNE loops that ILECs provided to other carriers increased "by 62%, to a total of about 5.3 million," in addition to the 6.8 million lines resold to CLECs).

2. Regulation is incapable of getting intercarrier rates "right."

Opponents of bill-and-keep further suggest that regulation is just as capable as the market of fixing an appropriate price to recover the costs of termination (or, in the case of access traffic, the costs of origination as well). Those opponents both overestimate the ability of regulation to "get the price right" and underestimate the social and economic costs of getting the price wrong. AT&T, for example, contends that any arbitrage problem associated with CPNP "is *easily solved* simply by strict application of the existing requirement of cost-based prices." AT&T Comments 8 (emphasis added).

These opponents appear unaware that regulators have tried and failed for many years to produce prices for origination and termination services that are accurately structured to reflect the "costs" of providing those services, and the result has been litigation, arbitrage, and regulatory uncertainty. Indeed, one need look no further than the Fifth Circuit's recent decision rejecting the 6.5% X-factor justification in the *CALLS Order*, or the D.C. Circuit's rejection of the Commission's prior rationale for the same X-factor, to recall how impossible it is to achieve regulatory certainty in this area so long as one carrier may charge another for its own origination or termination costs. And, as discussed in Qwest's opening comments (at 12-15), the fault lies not in the regulators but in the type of regulatory question at issue.

"Getting the rates right" is impossible enough on several levels even when the Commission has answered all the basic methodological questions. *See* Rogerson Decl. 14-15, 18-20. First, as the experience in the states has shown, regulators acting in good

⁷ See Texas Office of Public Util. Counsel v. FCC, 265 F.3d 313, 328-29 (5th Cir. 2001); United States Tel. Ass'n v. FCC, 188 F.3d 521 (D.C. Cir. 1999).

faith can and do disagree profoundly in the application of a single methodology – TELRIC – to any given rate element. Second, regulators cannot, and should not, be expected to keep pace on a monthly basis with the latest price-reducing developments in termination rates. *Id.* at 5, 14-15. And, even if they could, the industry's inability to predict what regulators will do itself tends to skew the market. Bill-and-keep would altogether eliminate that problem by specifying a single, predictable, and permanent solution to the recovery of termination costs.

Third, simply as a matter of practical necessity, CPNP narrows the options available for the recovery of termination costs. CPNP all but requires some variant of per-minute pricing because, as a practical matter, that is the only feasible way to enable a terminating carrier to allocate responsibility for termination among the multiplicity of other carriers that deliver traffic to any given subscriber of the terminating carrier. Bill-and-keep, in contrast, would permit carriers to experiment with various combinations of usage-sensitive and flat-rated charges on the subscribers with whom they have a steady, ongoing relationship — an option that is infeasible under CPNP. This distinction between the two approaches is quite significant, because, as discussed in Qwest's opening comments (at 12-15), no per-minute rate can accurately reflect the costs of providing

⁸ See, e.g., In the Matter of Joint Application by SBC Communications, Inc., et al., for Provision of In-Region, InterLATA Services in Kansas and Oklahoma, Memorandum Opinion and Order, CC Docket No. 00-217, FCC 01-29, ¶ 91 (rel. Jan. 22, 2001) ("TELRIC-based pricing can result in a range of rates, which is wide enough to encompass" "significantly different" rates in different states).

⁹ Indeed, in curtailing the use of the flat-rated PICC on IXCs in favor of an increased subscriber line charge, the Commission itself indicated that direct end user charges allow for more "straightforward, economically rational pricing structure[s]" than do intercarrier charges. *Access Charge Reform*, Sixth Report and Order, 15 FCC Rcd 12962, 12991-92, ¶ 78 (2000) ("*CALLS Order*") (eliminating the residential and single-line business Presubscribed Interexchange Carrier Charge).

termination services. From an economic perspective, the costs to be recovered are the extremely lumpy costs (unassociated with any particular call) of assuring adequate capacity to accommodate traffic during peak load periods. When the market is permitted to decide how those costs should be recovered (as, for example, in the unregulated retail plans offered by wireless carriers), the result is a range of different solutions, most of which involve some element of flat-rated pricing. Again, for the network costs at issue here, that is an option available only under bill-and-keep, not under CPNP.

Even more fundamentally, CPNP would require the Commission and the states to continue playing a heavy regulatory role in the resolution of disputes among different categories of carriers about whether and how each such category should be treated differently in the intercarrier compensation calculus. Such disputes already abound within the industry. For example, CLECs and ILECs argue about whether, as AT&T contends, a CLEC should be able to "charge higher 'tandem' switching rates when it terminates calls from a switch in its efficient, single-layer switching architecture that serves a geographic area comparable to a tandem switch in the incumbent's legacy two-layer switching architecture." AT&T Comments iii. At the same time, CLECs and ILECs argue about whether carriers that specialize in terminating traffic to a specific kind of customer – such as ISPs – incur lower termination costs and should be compensated less. See ISP Reciprocal Compensation Order ¶ 93. Similarly, LECs and CMRS

¹⁰ In the Matter of Implementation of the Local Competition Provisions in the Telecommunications Act of 1996 and Intercarrier Compensation for ISP-Bound Traffic, Order on Remand and Report and Order, CC Docket. Nos. 96-98, 99-68, FCC 01-131, at ¶ 76 (rel. Apr. 27 2001) ("ISP Reciprocal Compensation Order").

providers argue about whether the latter incur higher termination costs than the former. See, e.g, NPRM ¶¶ 104-05; AT&T Wireless Comments 22-23.

Unlike bill-and-keep, CPNP compels the Commission to resolve such disputes. And, to resolve them, the Commission must make intrusive, value-laden comparisons among incommensurable network architectures and technologies and the costs they generate in handling particular kinds of traffic. Such comparisons are inevitably inexact. transitory, controversial – and unnecessary. Indeed, the Commission could avoid such comparisons altogether by moving to a bill-and-keep regime. Under bill-and-keep, the Commission would no longer need to ask whether CLECs have achieved unusual efficiencies by specializing in a single class of customers. Nor would it need to decide whether CLECs should be paid more than ILECs for termination at the central office on the theory that "CLEC networks may use long-loops or fiber rings in place of the tandem switches deployed by ILECs," and "delivery of a call to the CLEC central office may often be the functional equivalent" – for pricing purposes – "of delivering a call to the ILEC tandem office." Focal Comments 45. These cross-technology comparisons are arbitrary and, ultimately, deeply inimical to any truly deregulatory approach to telecommunications. More fundamentally, no carrier should be compelled to subsidize, through another carrier's origination or termination rates, that second carrier's choice of network architecture. That second carrier should have its choice validated – or not – based on the willingness of its own end users to support it by paying rates to that carrier.

3. The regulatory inaccuracies inherent in CPNP have significant market-distorting consequences.

Contrary to the position of CPNP's champions, the arbitrage consequences of not "getting the price" right under CPNP are considerable and ultimately quite harmful to the

industry. As the ISP experience has shown, an entire segment of the telecommunications industry can grow up in reliance on a gap between termination rates and costs, and the cost of making the necessary regulatory correction is further industry instability. In a competitive environment, so long as CPNP is the rule, such arbitrage opportunities will be unavoidable, because carriers will always look for ways to exploit the inevitable inaccuracies in government-imposed intercarrier rates. And the effects of such distortions will be particularly severe where – as is the norm under current regulation – the originating carrier or IXC lacks authority to pass artificially high intercarrier termination rates back to the specific end users that originate the calls. *See, e.g.,* 47 U.S.C. § 254(g); *see generally* Rogerson Decl. 13-14.

The ISP example illustrates the consequences of such regulatory distortion. Above-cost termination rates produced not just an artificial subsidy for heavy dial-up Internet usage, but a wealth transfer from ILECs (the originating carriers paying the above-cost rates) to CLECs (the terminating carriers that received those rates). Because the states did not permit the ILECs to pass that burden back specifically to the end users who made ISP-bound calls (indeed, the states generally barred the ILECs from responding to the increased traffic by raising their rates at all), those end users received no price signals to use the ILECs' networks efficiently. This Commission wisely recognized that it makes no sense to subsidize heavy use of the Internet by artificially disadvantaging one class of carriers (and their shareholders or rate-payers) to the benefit of another. See ISP Reciprocal Compensation Order ¶ 66-76. Moreover, correcting the problem disrupted business plans that were based on gaming the regulatory system, and that in turn caused further economic dislocation. Contrary to the inexplicable position

taken by Time-Warner Telecom (Comments 10-11), the underlying culprit here was the regulatory problem, not the correction. And there would have been no such problem, and thus no need for subsequent correction, if the government had chosen bill-and-keep from the outset.

The type of arbitrage opportunity created by excessive *intercarrier* rates should be distinguished from the quite different arbitrage opportunities that arise when regulation sets an above-cost *retail* rate for a service offered by a dominant carrier, a competitive carrier offers the same service at an unregulated rate, and the market actors choosing between those two services *are the same ones who must pay the rate*. In that context, those market actors (typically end users) receive immediate price signals that cause them to choose the cheaper service, and that dynamic automatically begins moving industry prices towards costs.

That is not the case here: When a regulator sets *intercarrier* termination rates too high, it is often the case that *no* relevant market actor will receive appropriate price signals, and arbitrary intercarrier wealth transfers may persist without any market correction whatsoever. That is what was so pernicious about above-cost reciprocal compensation rates in the ISP-bound traffic context. Because the typical originating carrier (an ILEC) was barred from passing back to particular end users the termination rates charged by a CLEC serving an ISP, no end user had any incentive to avoid ISPs served by CLECs that charged above-cost rates, and the only mechanism for correcting the problem was a purely regulatory one. Such distortions will always be a threat so long as government engages in the precarious exercise of making one carrier pay for another's network costs.

B. Bill-and-keep is consistent with principles of cost-causation.

As explained in William Rogerson's Declaration (at 25-28), bill-and-keep is at least as consistent as CPNP with economic principles of cost causation. Indeed, the very premise of CPNP is that the calling party is responsible for all of a call's costs and that the called party is responsible for none. That premise is obviously false: the called party is capable of precluding costs from being incurred simply by declining to take a call or choosing to terminate it, and the called party's network has continuous opportunities to pick more or less efficient terminating technology. The supposed economic advantage of CPNP is illusory on another level as well, because regulatory restrictions preclude carriers in a wide range of circumstances from passing the costs of specific calls back to the individual calling parties that supposedly "cause" them.

In questioning the economic foundation of bill-and-keep, most opponents attack a straw man: the notion, upon which arguments for bill-and-keep do *not* rest, that the calling party and the called party evenly share exactly the same benefit on any given call. *E.g.*, Time-Warner Telecom Comments 6. The question is not whether each party shares *benefits*, but whether each is a causer of *costs* in the sense that each stands in a position to preclude certain costs from being incurred. The answer to that question is undoubtedly yes: each carrier can take measures to lower the costs of termination, and each end user can take measures – from hanging up to requesting an unlisted number – to avoid call-related costs.

Second, and more fundamentally, the argument for bill-and-keep is not that it perfectly assigns costs to the parties that cause them, but that its method of allocating costs is at least as efficient as CPNP's alternative method and that it is preferable to

CPNP in the other respects discussed above (namely, an increased reliance on market forces rather than regulation in the recovery of each carrier's network costs, the elimination of arbitrage opportunities, and the preservation of long-term industry stability). There can be no credible argument that CPNP somehow does a better job than bill-and-keep of allocating costs: with respect to any given call, CPNP inaccurately presumes that the calling party must pay for 100% of the call, even though, by answering the telephone and permitting the call to continue, the called party is responsible for a significant percentage of the costs that are incurred.

Proponents of CPNP contend that this deficiency will be sorted out if every called party perceives an obligation to settle accounts by placing a commensurate number of calls back to the original calling parties. *E.g.*, AT&T Comments 23. But that is no answer at all. Many calls are made between parties without any kind of ongoing relationship, and there is no reason to believe that, even where parties do make an effort to call each other back, the resulting costs will be borne with anything approaching proportionality. In sum, the principle of cost-causation is not remotely a strike against, and if anything is further support for, the adoption of bill-and-keep over CPNP. *See* Rogerson Decl. 25-28.

C. There is no basis for concern that bill-and-keep would induce carriers to specialize in originating traffic or would increase the number of unwanted calls.

In the *ISP Reciprocal Compensation Order*, the Commission soundly repudiated its previous concern that bill-and-keep would give carriers uneconomic incentives to specialize in the origination of traffic. As the Commission observed there, "[a] carrier must provide originating switching functions and must recover the costs of those

functions from the originating end-user, not from other carriers. Originating traffic thus lacks the same opportunity for cost-shifting that reciprocal compensation provides with respect to serving customers with disproportionately incoming traffic." *ISP Reciprocal Compensation Order* ¶ 73.

That analysis is correct. In contending otherwise, a few CLECs argue that billand-keep would enable carriers specializing in origination to undersell the rates that other
carriers charge their own subscribers. *E.g.*, Time-Warner Telecom Comments 11. The
CLECs' argument is that those other carriers must charge their subscribers not just for the
origination costs of any given call, but for the termination costs of that same call as well.
This argument is without merit. If bill-and-keep is the intercarrier compensation rule, a
carrier operating in a competitive environment will succeed in charging its end users only
for the portion of network costs for which it is legally responsible. By hypothesis, that
will not include the costs of terminating a call on another carrier's network. As a result,
there would be no regulatory incentive for a carrier to specialize in originating traffic,
because the price it could successfully charge for performing that service would need to
cover the quite significant costs of origination plus some significant portion of transport,
and those would be the same costs that other, competing carriers would need to recover
as well. *See* AT&T Wireless Comments 27-28.

Some CLECs contend that current ILEC retail rates are designed to recover both the origination and the termination costs of all (non-access) calls originating on the ILEC's network. *E.g.*, Time-Warner Telecom Comments 23-25; *see also* Focal Comments 10-11. That contention, which the Commission has already rejected, is both inaccurate and irrelevant to the merits of bill-and-keep. As a factual matter, the

Commission has repudiated similar claims by the same CLECs "that ILEC end-user rates are designed to recover from the originating end-user the costs of delivering calls to ISPs." *ISP Reciprocal Compensation Order* ¶ 88. As the Commission observed, "most states have adopted price cap regulation of local rates," and thus "rates do not necessarily correlate to cost in the manner the CLECs suggest." *Id.* at n.174. That is not only true but an understatement. Even apart from the typical inability of ILECs to raise local rates to accommodate the growth of ISP-bound traffic, the use of price caps renders nonsensical any effort to draw a close correspondence between an ILEC's current retail prices and the specific functions that are performed in the disposition of local calls.

In any event, even if ILEC rates were currently structured such that some CLECs would specialize in originating traffic if exempted from an obligation to cover termination costs, that fact could not logically support an argument against bill-and-keep. Unlike the low termination rates (and sharing of intercarrier revenues) that CLECs could offer ISPs before the Commission stepped in this past April, the lower retail rates charged by the CLECs for originating traffic would not reflect an arbitrary carrier-to-carrier wealth transfer or any other irrational subsidy. They would reflect only the underlying cost of providing the portion of the service for which those CLECs would be responsible under bill-and-keep. To the extent that ILECs respond to those low rates by reducing their own rates to compete for the same customers, that would be an obvious benefit of bill-and-keep, not a disadvantage.

There is, finally, no empirical basis for the argument that bill-and-keep would increase the number of unwanted calls by companies that place more calls than they receive, such as telemarketers. As an initial matter, it is obviously not the case that, as

AT&T contends, bill-and-keep would make "every call a collect call." AT&T Comments 33. To the contrary, as the Commission has explained, carriers under a bill-and-keep regime – and thus the customers of those carriers – would need to cover the costs of each call's origination as well as a substantial share of transport costs as well. *See ISP Reciprocal Compensation Order* ¶ 73. There is no empirical basis for concluding that the volume of telemarketing calls would significantly increase if the costs of a call were split between originating and terminating carriers rather than, as now, borne entirely by the originating carrier. *See also* Rogerson Decl. 30-31.

Even if bill-and-keep were likely to increase the number of unwanted calls, the appropriate solution is not to reject bill-and-keep itself but to address the problem of unwanted calls directly. First, the market has already produced a number of caller identification and call blocking technologies that shield subscribers from unwanted calls, and such market responses can be expected to become even more effective over time. See Owest Opening Comments 39. In any event, even if the market could not be trusted to solve this problem, the appropriate regulatory response would be to enforce direct restrictions on the ability of telemarketers to place calls to nonconsenting individuals. Indeed, the Commission now follows exactly that approach. As AT&T itself observes (Comments 32-33), there are already highly effective restrictions on the kinds of telemarketing calls that can be placed to the subscribers of any wireless service "or any [other] service for which the called party is charged for the call." 47 C.F.R. § 64.1200(a)(1)(iii) (emphasis added). Moreover, the Commission and a number of states independently require telemarketers to place called parties on a "do not call" list upon request. See 47 C.F.R. § 64.1200(e)(2)(iii).

II. An efficient bill-and-keep regime would allocate default financial responsibility for transport at the "edge of the network."

The defining characteristic of bill-and-keep is a default division of financial responsibility for the costs of handling traffic at some point between two interconnecting networks; in the absence of negotiation, each interconnecting carrier – whether it is an ILEC, CLEC, wireless provider, or IXC – must recover from its end users, and not from the other carrier, all network costs on its side of that point. Qwest has called that point the "financial point of interconnection," or "financial POI." It is to be distinguished from the place where two networks actually interconnect, which Qwest has called the "physical POI." As an example of the difference between these two points, the physical POI between an originating LEC and an IXC in a long-distance call is today the POP, but the financial POI is, in effect, the loop side of the end office switch, since the IXC bears financial responsibility for all costs from that point.

At bottom, two basic variables define the major differences among bill-and-keep proposals: (1) the mechanism for identifying financial POIs in each network, and (2) the mechanism for determining the placement and types of physical transport links between the two networks. These two variables are obviously related, as DeGraba's proposal

Under current Commission regulations, each carrier is required to designate at least one physical POI in every LATA that it serves for the receipt of terminating traffic. The Commission should retain that approach under bill-and-keep and should clarify that, where a carrier makes only one physical POI available in a LATA, it is responsible for all network costs incurred on its side of the POI (*i.e.*, this designated physical POI also serves as the carrier's financial POI). Although LATAs are the creatures of an obsolescent regulatory regime, they remain a readily available – if imperfect – means of dividing up the country for these purposes.

illustrates. ¹² DeGraba would address the first issue (the designation of financial POIs) by requiring a carrier, in the absence of negotiations, to provide transport in any LEC-to-LEC call all the way to the end office serving the called party. Put another way, it would automatically place the financial POI for the call at that end office, and it would require the terminating carrier to recover from its own end users the costs of all "local access facilities" (*i.e.*, terminating switching and the loop) on its side of that point. The DeGraba proposal would then address the second issue (the deployment of efficient transport facilities between the two networks) by relying on negotiations against the backdrop of the specified default outcome. The premise of the DeGraba approach is that the very inefficiency of the default outcome – *i.e.*, each carrier's obligation to provide transport to the other carrier's end office over one-way transport facilities – would induce each carrier to negotiate an efficient, mutually advantageous transport solution, such as the use of two-way trunking.

In that respect, DeGraba's designation of the end office as the default dividing line for financial responsibility would not result (and is not intended to result) in *physical* points of interconnection anywhere near the end office. It would, however, have quite significant effects on the relative bargaining power of the two interconnecting carriers. In particular, DeGraba's approach would disadvantage those carriers that have fewer "end offices" than the carriers with which they must interconnect, because their transport burden under the DeGraba regime would be greater than that of the other carriers. That

¹² "The DeGraba proposal" denotes the December 2000 white paper written by Patrick DeGraba and issued by the Office of Plans and Policy. *See* Patrick DeGraba, "Bill and Keep at the Central Office as the Efficient Interconnection Regime," OPP Working Paper #33 (2000) ("*DeGraba*").

fact presents significant competitive concerns, since ILECs typically have many more end offices in a given locale than do CLECs. Moreover, because DeGraba's default rule would require CLECs to obtain transport deep within an ILEC's network, it would generate calls for intrusive government intervention in an ILEC's provision of its transport facilities at regulated rates to help CLECs meet their transport obligation.

Those defects in DeGraba's approach – the asymmetry of obligations as between ILECs and CLECs, and the potential for undue regulation of transport within an ILEC's network – can be resolved by adopting a different approach to the placement of financial POIs. In Section III.A, below, Qwest proposes such an approach, under which financial responsibility would be allocated (by default) at the "edge" of an interconnecting carrier's network. In a circuit-switched ILEC network, that generally means the access tandem serving the called party's end office.

That default designation of financial POIs, however, is only a first step. The ultimate goal of any sensible transport solution is the creation of conditions under which any two carriers will make use of efficient transport arrangements — and, in particular, two-way trunks between their networks wherever justified by traffic volumes. Requiring interconnecting carriers to specify financial POIs for any given call does not *by itself* produce efficient two-way transport arrangements between the carriers' networks, because (among other considerations) the financial POI in carrier X's network for traffic flowing in one direction would seldom coincide with the financial POI in carrier Y's network for traffic flowing in the opposite direction. As discussed below, the question is whether, in the spirit of DeGraba, the Commission should rely on intercarrier

negotiations against the backdrop of financial POI default rules to produce efficient twoway trunking arrangements.

A. The default dividing line for financial responsibility in the transport of telecommunications traffic should be drawn at the edge of the other carrier's network.

There are several advantages to a default rule that designates the financial POI for a given call at the edge of the other carrier's network. The term "edge of the network," which is defined more precisely below for different types of networks, can be roughly described as the set of points within a carrier's network where interconnection with other networks is technically feasible and where it is efficient for that carrier to manage a high volume of traffic bound for, or originating from, end users distributed over a broad geographic area. The edge of a carrier's network is thus to be distinguished from points deep within a carrier's network architecture, such as an end office (in a hierarchical circuit-switched network) serving a small number of end users distributed over a confined area.

One key advantage of designating the financial POI at the edge of the network is that it would limit the number of points in an ILEC's network to which other carriers would have a financial obligation to transport traffic, and it would therefore remove the anticompetitive asymmetry (discussed above) inherent in the DeGraba approach.

Moreover, by removing that asymmetry, it would ensure that each carrier has roughly equal incentives to negotiate efficient transport solutions (including the deployment of two-way trunks), since neither carrier would be systematically much worse off or much better off than the other in the event that negotiations break down. That would greatly alleviate any theoretical concern that ILECs might avoid good faith negotiations, and

make themselves slightly worse off in the short term, in the hope that, by making CLECs *much* worse off, they could drive them from the market altogether. *See* Rogerson Decl. 7-8. Finally, because a range of transport options is typically available for carriers that interconnect at the edge of others' networks, sparing an interconnecting carrier from an obligation to deliver traffic to multiple points deep within each network would significantly reduce the circumstances in which there would be calls for regulatory intervention in the rates that ILECs may charge an interconnecting carrier for transport using the ILEC's facilities. *See id.* at 17-18.¹³

To identify the "edge" of a carrier's network for purposes of dividing financial responsibility between interconnecting carriers, the Commission must first distinguish between two different types of network architecture. In the hierarchical circuit-switched architecture that characterizes the networks of the major ILECs, the "edge" is typically the location of a higher-order switch such as an access tandem. In a "flat" packet-switched architecture, by contrast, the "edge" could include any node in the local network where interconnection is technically feasible.

This distinction reflects the fundamentally different ways in which traffic is routed over these two types of networks. As the Internet backbone illustrates, hot potato routing – the delivery of a call to the closest technically feasible point on another carrier's

¹³ Because Qwest's approach would permit interconnection at the edge of an ILEC's network, it would significantly reduce and perhaps eliminate the circumstances in which an interconnecting carrier could be said to have been "impaired," under 47 U.S.C. § 251(d)(2), by the denial of access to an incumbent LEC's transport facilities at regulated rates. See generally Implementation of the Local Competition Provisions of the Telecommunications Act of 1996, Supplemental Order Clarification, 15 FCC Rcd 9587 ¶¶ 12-17 (2000) (noting context-specific character of "impairment" analysis under section 251(d)(2)).

network – is generally an efficient transport solution for a packet-switched network, because the individual packets constituting that call can follow any number of routes within that network to their final destination and, by definition, will not tie up a given "circuit." As observed in Qwest's opening comments (at 30), however, it would not be similarly efficient to permit a carrier to drop a call off anywhere in a typical circuit-switched network, because such networks require both predictability of transmission paths and conservation of the available circuits occupied by circuit-switched traffic.

For these reasons, the dividing line of financial responsibility -- *i.e.*, the financial POI -- should vary depending on whether a given network is circuit-switched or packet-switched. For packet-switched networks, the financial POI is appropriately placed at any technically feasible point, such as a gateway, within a defined geographic area. (As discussed in note 11, above, the relevant area is probably best defined, given current conventions, as a LATA.) The upshot of this approach is that, if carrier A drops off traffic at any given gateway on carrier B's packet-switched network, carrier B must recover from its end users - and not carrier A - the costs it incurs in handling those calls on its side of that point.

The approach proposed here requires somewhat greater elaboration when applied to a traditional circuit-switched network. In that context, an appropriate financial POI is any point in the carrier's network corresponding to the access tandem serving the called party's end office (or, in the event the carrier has no such tandem, to the end office itself). For example, suppose that carrier A – which could be an IXC, a wireless carrier, or a

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¹⁴ See generally Michael Kende, "The Digital Handshake: Connecting Internet Backbones," OPP Working Paper #32 (2000).

LEC - drops off traffic at carrier B's access tandem at the edge of the latter's circuitswitched network, and suppose that carrier B's end user is served by an end office subtending that tandem. In that event, carrier B must recover from its end user, and not from carrier A, all costs associated with that traffic on its side of that point, including tandem switching, end office switching, and transport between the end office and the tandem. Now contrast the following situation: An ILEC has two access tandems -Tandem A and Tandem B – in a LATA. A CLEC wishes to interconnect with the ILEC only at Tandem B. Under the approach described here, the CLEC is free to choose that option, and it will pay none of the costs beyond its side of Tandem B for traffic to end users served by an end office subtending Tandem B. It will, however, bear financial responsibility for the additional network costs of delivering to Tandem A any traffic to end users served by an end office subtending Tandem A but not Tandem B. Because it would be generally inefficient to route such calls through two tandem switches, the originating carrier should receive appropriate price signals to deliver them to the tandem serving the relevant end office. Finally, it bears emphasizing that these outcomes are merely defaults; carriers are of course free to negotiate alternative allocations of financial responsibility if they wish.

B. Carriers are likely to negotiate efficient two-way trunking solutions without extensive regulatory intervention beyond the designation of the financial POIs.

An identification of financial POIs in a given carrier's network is a critical component of an efficient transport solution, but it does not complete the inquiry.

Networks do not exactly coincide, and one carrier's financial POI for traffic moving in one direction will be separated – whether by a matter of inches or miles – from the other

carrier's financial POI for traffic moving in the other direction. Somehow that gap must be bridged, for otherwise – if they simply follow-the default rules for financial POIs – carriers will deploy inefficient one-way trunks to other carriers' networks.

Before addressing whether regulatory specificity is needed to meet that objective, it is important to restate the efficient and desired outcome: the deployment of two-way trunks between the respective networks wherever justified by traffic volumes. Given the financial POI rules described above, detailed additional regulation may well be unnecessary to achieve that outcome. Any two carriers have a shared interest in reducing their aggregate costs by deploying a single, efficient two-way trunk, rather than two inefficient and redundant one-way trunks, for the traffic between their two networks. Of course, each carrier has an individual, self-interested incentive to avoid paying as much of the cost of that trunk as possible. But, given each carrier's background obligation to interconnect with other carriers, *see* 47 U.S.C. § 251(a)(1), and given that the default outcome is the construction (to the disadvantage of both carriers) of separate one-way trunks, each carrier would have a strong incentive to agree to share the costs of a single two-way trunk so long as *some* traffic flows in each direction between the two carriers.

Indeed, negotiations are more likely to succeed in producing efficient transport solutions under the approach proposed here than under the DeGraba proposal. Because carriers would be free to relinquish financial responsibility at the edge of another carrier's network, the default outcome would no longer disproportionately benefit carriers, such as large incumbent LECs, that have many end offices to which other carriers, such as CLECs, would bear the financial responsibility for delivering traffic. Qwest's approach would thus give ILECs added incentives to negotiate transport solutions in good faith.

because impasse would no longer make other carriers systematically worse off than ILECs. See Rogerson Decl. 7-8. In sum, designation of financial POIs at the edge of the network may well be enough to ensure fair and efficient two-way trunking solutions, without further regulation, for most intercarrier interconnection.

A significantly more interventionist option would be to promulgate detailed, nationally uniform regulations comprehensively establishing how networks must interconnect in specified circumstances, when two-way trunks should be required, how financial responsibility for those trunks should be allocated among the intercarrier carriers, how routing should be determined, and so forth. *See, e.g.,* AT&T Wireless Comments 42-44. As in other contexts, however, it is far easier to add regulations incrementally once the need for them becomes apparent than it is to rescind regulations that, in hindsight, may not be strictly necessary. The Commission should thus adopt a market-oriented approach based on the placement of financial POIs at the edge of the network, study how well the market responds to the imperative for negotiation, and only then consider whether a more interventionist approach is necessary.

One context in which narrowly targeted regulatory intervention might arguably be necessary is where the traffic volume between carrier A's end office and carrier B's network is heavy enough to justify a direct trunk group that bypasses carrier A's tandem switch. For example, if that direct trunk group runs through the tandem location (and not through the tandem switch itself), it may be necessary to require carrier B to segregate the traffic destined for carrier A's high-volume end office so that it can be placed on the direct trunk group. The potential problem in such cases is that, if these direct-trunking disputes are viewed in isolation, carrier B may appear to have too small an incentive to

deviate from its default option of simply delivering all traffic on an unsegregated basis to the tandem switch. On the other hand, carriers normally negotiate a broad range of issues in combination, and it is unlikely that carrier B would permit negotiations to break down altogether, and thereby incur an obligation to underwrite the entire cost of inefficient one-way trunks, simply to avoid an efficient solution to direct trunking needs.¹⁵

C. Appropriate implementation of bill-and-keep would eliminate concerns about ILEC discrimination against unaffiliated IXCs.

AT&T (Comments 48-51) and WorldCom (Comments 24-27) express concern that bill-and-keep would increase an ILEC's ability to discriminate – with respect to both quality of service and pricing of local access – against unaffiliated IXCs in favor of the ILEC's own long-distance affiliate. That concern is misplaced. *See* Rogerson Decl. 21-24. Any ability of ILECs to engage in price or non-price discrimination is independent of the intercarrier compensation regime the Commission adopts. And any such ability can in any event be adequately addressed through regulations prohibiting such discrimination. *See id.* This is why the Commission has long imposed structural separation requirements

¹⁵ Many calls involve three carriers: the originating carrier, the terminating carrier, and a carrier that provides transport services in between. An IXC is a transport service provider that has an independent relationship with the calling party. It would be subject to the rules discussed in this section, and it would be responsible for recovering from its own subscribers all costs between the financial POI of the originating carrier and the financial POI of the terminating carrier. In contrast, a "transiting" carrier is a transport service provider that does *not* have an independent relationship with the calling or called party. Such a carrier essentially serves as a subcontractor to the originating carrier, helping the latter meet its responsibility to deliver calls to the terminating carrier's network. As discussed in Qwest's opening comments (at 25 n.14), a transiting carrier is entitled to be paid by the originating carrier for performing that service.

for non-BOC dominant LECs that offer long-distance services and why Congress added for BOCs the more specific safeguards set forth in 47 U.S.C. § 272(e). 16

In challenging bill-and-keep on the ground that it would permit discrimination against stand-alone IXCs, therefore, AT&T and WorldCom attack a straw man: they appear to assume that, in transitioning to bill-and-keep, the Commission would overlook the need to retain appropriate safeguards against discrimination. Of course, the Commission would not overlook that need, and in any event the statutory safeguards set forth in section 272(e) would remain in force. To remove any doubt on this issue, the Commission should simply clarify that, under bill-and-keep, each ILEC (to the extent that it is dominant in the access market) must provide its end users with access to unaffiliated IXCs on the same terms, at the same rates, and with the same quality of service as the access it provides to its own IXC affiliate.

With respect to pricing, this means that, until it is deemed non-dominant in the provision of access services, an ILEC must have a standard menu of rates (which could be flat-rated or usage-sensitive or some combination of the two) for local services, and that menu cannot vary depending on an end user's choice of IXCs. With respect to quality of service, this non-discrimination imperative means, among other things, that

¹⁶ The Commission recently sought comment on whether it should relax structural separation requirements for non-BOC ILECs. See In the Matter of 2000 Biennial Regulatory Review, Separate Affiliate Requirements of Section 64.1903 of the Commission's Rules, Notice of Proposed Rulemaking, CC Docket No. 00-175, FCC 01-261 (rel. Sept. 14, 2001).

¹⁷ As AT&T appears to acknowledge (Comments 50), its concern about anticompetitive "price squeezes" by dominant LECs would be no more valid under a bill-and-keep regime than it is under the existing access charge regime. *See* Rogerson Decl. 24; *see also Southwestern Bell Tel. Co. v. FCC*, 153 F.3d 523, 548 (8th Cir. 1998) (affirming Commission determination that IXC price squeeze concerns "are unwarranted because adequate safeguards are in place to prevent such an occurrence").

each ILEC must agree to route any tandem-switched traffic bound for its own IXC affiliate through the same end office-to-tandem trunks that it uses to route tandem-switched traffic bound for an unaffiliated IXC. And, just as ILECs typically divert overflow access traffic from direct trunk groups onto tandem-switched transport facilities en route to any IXC, they should be required to ensure that those same facilities are available to handle overflow traffic from direct trunk groups destined for unaffiliated IXCs. *See* Rogerson Decl. 22.

III. The adjustments bill-and-keep would require to end user rates and universal service are not "disadvantages" of bill-and-keep, but steps in the right direction.

A number of carriers and states oppose bill-and-keep on the ground that it would increase end user rates, particularly the rates charged by the independent LECs operating in high-cost areas. *E.g.*, NTCA Comments 12-13. Reduced to its essentials, this is simply an argument to postpone the day in which universal service subsidies will be explicit and competitively neutral rather than, as now, implicit and inefficient.

Although bill-and-keep would lead to rate increases for some services, it would also lead to at least commensurate rate reductions for other services. Today, consumers end up paying for access charges through higher IXC rates, and, as a group, they would do at least as well if those charges were imposed on them directly rather than, as now, indirectly through their IXCs. Put another way:

[S]hifting the recovery of [access] costs from carriers to end users should not, on average, increase the total costs faced by end users. This is so because carriers that currently pay inter-carrier charges, like long-distance carriers, pass these costs on to end-user customers in the form of higher rates. Thus, although a customer may see an increase in the bill he receives from his LEC, he should see a corresponding decrease in other charges, such as lower charges from his long-distance carrier.

DeGraba at ¶ 125. Indeed, for the reasons discussed above, a move to bill-and-keep for all traffic would produce significant gains for net consumer welfare. Bill-and-keep would reduce the significant costs of regulatory uncertainty and inefficient arbitrage, and a significant portion of those savings would be passed on to consumers in the form of lower retail rates within the telecommunications industry as a whole. ¹⁸

The "consumer welfare" concerns raised about the application of bill-and-keep to access traffic are therefore not concerns about consumer welfare in the aggregate, which bill-and-keep could only enhance. Instead, the concern is that, as rates for most end users go down, rates for other end users would rise to meet the actual costs of serving them (in the absence of an explicit universal service response). That is because bill-and-keep would eliminate current implicit subsidy mechanisms that shield certain end users from bearing responsibility for the unusually high costs involved in connecting them to the network.

The existing access charge regime embodies two principal subsidy mechanisms. First, current access charges as a whole may exceed the aggregate costs of providing the specific access services with which they are associated, thereby permitting incumbent LECs to offer lower rates for basic local service. Second, and more important in this

¹⁸ Although some critics suggest that consumers would find it hard to read their bills after a switch to bill-and-keep (*e.g.*, AT&T Comments 6, 33), those concerns are a sham. At worst, consumers would have to pay two separate sets of charges: those that cover the services offered by an end user's LEC, and those that cover the services offered by an end user's IXC. But that, of course, is the case today. The only difference is that certain costs that used to be associated with the IXC would now be associated with the LEC. There is nothing particularly "confusing" about that outcome, and in any event all carriers would have an incentive to find market-oriented ways to reduce any confusion.

¹⁹ The *CALLS Order* purported to eliminate that implicit subsidy mechanism for price-cap LECs on the interstate side of the ledger. *But see Texas Office of Pub. Util. Counsel*,

context, 47 U.S.C. § 254(g) requires an IXC – to the extent that it must pay access charges – to recover them not from the specific end users that cause them to be incurred, but from the IXC's national subscriber base. That national averaging requirement forces an IXC's end users in low-cost areas to pay significantly above-cost rates for conventional long-distance calls so that end users in high-cost areas may pay artificially low rates. Bill-and-keep would largely eliminate this subsidy mechanism because, by requiring each LEC to recover its network costs from its own end users, it would remove access charges from the scope of the costs that are subject to the national averaging requirement.

Although including access charges within the scope of that requirement may have made sense as a transitional measure in the wake of the 1996 Act, it would be inappropriate on two levels to rely on that mechanism as a long-term solution to universal service needs. First, it is implicit rather than explicit and, as such, is irreconcilable with the new universal service mandate of section 254. Second, the geographical averaging mechanism is not at all competitively neutral: it places the subsidy burden not on telecommunications providers as a whole, but on providers of a limited category of telecommunications services (conventional long-distance services). That, too, cuts against the grain of section 254, which emphasizes the twin needs, in a competitive marketplace, to make universal service mechanisms fully explicit and to spread the

²⁶⁵ F.3d at 327-28 (vacating that portion of *CALLS Order*). Moving to bill-and-keep for access traffic would not by itself necessarily eliminate *this* form of implicit subsidy where it persists, because regulators could theoretically choose to retain the subsidy mechanism in the form of higher rates that ILECs charge end users directly (rather than indirectly through higher access rates charged to those end users' IXCs).

contribution obligation as broadly as possible among providers of telecommunications generally.

In short, the geographic averaging mechanism that bill-and-keep's opponents wish to preserve is an anachronism and should be eliminated. Qwest understands that, by eliminating that implicit subsidy mechanism, bill-and-keep would require a significant expansion of current universal service mechanisms. In particular, it would require appropriate increases in the level of explicit contributions to the universal service fund. But that, again, is the necessary by-product of the reforms required by section 254.

Along these lines, there is no merit to suggestions that, by moving to bill-and-keep for access traffic, the Commission would somehow *violate* section 254(g). *Cf.*Focal Comments 42. By its terms, that provision merely requires "providers of interexchange telecommunications services" to average their rates among their entire subscriber base; it does not require such providers to pay access charges to ILECs.

Indeed, relieving IXCs of the need to subject access charges to that national averaging requirement is the only way to satisfy the larger emphasis in section 254 on explicit and competitively neutral funding mechanisms. If anything, therefore, bill-and-keep is more consistent than the current access charge regime with the universal service principles of section 254. A few parties also seek to revive the moribund argument that a separate subprovision within section 254 – 47 U.S.C. § 254(k) – must be interpreted to require IXCs, rather than end users, to bear the costs of access. That position, which has no foundation in either the letter or the objectives of section 254, has now been squarely rejected not just by the Commission, but also by two courts of appeals. *See Texas Office*

of Pub. Util. Counsel, 265 F.3d at 323-24; Southwestern Bell, 153 F.3d at 559. The Commission should reject it here as well.

Finally, adoption of bill-and-keep for interexchange traffic will require the recovery directly from end users of certain network costs that had previously been recovered indirectly from end users through access charges. The Commission should permit significant flexibility in the recovery of those costs. As discussed in Qwest's opening comments (and above), one of the principal benefits of bill-and-keep is that, for the first time, it would make it feasible to employ flat-rated recovery of the costs of terminating access where that is more efficient than recovery through usage-sensitive charges. Any decision to adopt bill-and-keep should be accompanied by sufficient flexibility in end user rates that those rate structure efficiencies can be achieved.²⁰

IV. The Commission has legal authority to impose bill-and-keep for most traffic.

The parties' divergent interpretations of the statutory provisions addressing intercarrier compensation rates confirm that those provisions, like a number of other

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²⁰ Because adopting bill-and-keep for access traffic would require significant reform of existing subsidy mechanisms, it would be appropriate to solicit the views of the Joint Board, just as the Commission might wish to do in response to the Tenth Circuit's recent decision invalidating the Ninth Report and Order. See generally 47 U.S.C. §§ 254(a), 410(a). Nonetheless, to avoid undue delay, the Commission should enforce a strict timetable for the presentation of the Joint Board's report and recommendation. A Joint Board could also recommend any adjustments to the current separations rules that might be appropriate to accommodate bill-and-keep. See 47 U.S.C. § 410(c). Although NECA hints that bill-and-keep would require significant changes to those separations rules, it is unclear why that would be so. As NECA acknowledges, bill-and-keep addresses how network costs are recovered (i.e., from end users or from other carriers), not how they are allocated between jurisdictions. See NECA Comments 13. Of course, this Commission and its state counterparts would need to continue ensuring that ILECs receive a compensatory rate of return on both the interstate and intrastate sides of the ledger. See generally Smith v. Illinois Bell Tel. Co., 282 U.S. 133 (1930). But there is no apparent reason why, after adoption of bill-and-keep, that requirement could not be met within the existing separations regime.

provisions in the 1996 Act, "[are] in many important respects a model of ambiguity or indeed even self-contradiction." *AT&T v. Iowa Utils. Bd.*, 525 U.S. 366, 397 (1999). In these circumstances, where there is no obvious way to reconcile the various strands in the statutory text, the result is a rule of considerable deference to the Commission. As the Supreme Court has observed, "Congress is well aware that the ambiguities it chooses to produce in a statute will be resolved by the implementing agency." *Id.* The Commission has broad discretion to resolve those ambiguities to pursue what, in light of its institutional expertise, it concludes is in the public interest. *See id.*

A. The Commission has authority to impose bill-and-keep for traffic covered by section 251(b)(5).

Opponents of bill-and-keep mistakenly treat the language of section 252(d)(2) as though it reflected a deliberate congressional choice as between CPNP and bill-and-keep for particular categories of traffic. *E.g.*, AT&T Comments 36-41. That provision does no such thing; in particular, it nowhere limits the reach of the bill-and-keep savings clause to cases of balanced traffic.²¹ Instead, Congress gave the FCC and the state commissions a choice: either to elect "arrangement[s] that waive mutual recovery (such as bill-and-keep arrangements)" or to elect a truly cost-based CPNP regime. *See* Qwest

AT&T contends (Comments 36) that section 252(d)(2)(B)(i) "clarifies that 'arrangements that waive recovery (such as bill-and-keep arrangements)" are permissible only "if they 'afford the mutual recovery of costs through the offsetting of reciprocal obligations." The first of those statutory quotations by AT&T omits a word in the bill-and-keep savings clause: that clause explicitly preserves "arrangements that waive mutual recovery (such as bill-and-keep arrangements)." AT&T thus nonsensically contends that the savings clause preserves "arrangements that waive mutual recovery" of costs only if those arrangements also (impossibly) "afford the mutual recovery of costs." 47 U.S.C. § 252(d)(2)(B)(i) (emphasis added). The Commission is entitled to assume that Congress meant to make sense, and any ambiguity in this statutory language should be resolved in favor of an appropriately robust construction of this savings clause.

Opening Comments 43. What section 252(d)(2) precludes is the imposition of a non-cost-based scheme of compelled payments between carriers. But section 252(d)(2) does not constrain the Commission's choice of bill-and-keep if it determines, as it should here, that it would better serve the public interest than a purportedly cost-based CPNP alternative.

In any event, even if the bill-and-keep savings clause were ignored, section 252(d)(2)(A), standing alone, would not preclude bill-and-keep arrangements, because at most it would require regulators to permit recovery of the "additional costs" of transport and termination. *See* Qwest Opening Comments 42. That specialized term is reasonably construed to limit any intercarrier payments to the short-term marginal costs (effectively zero) of transporting and terminating each call. *Id.* Contrary to WorldCom's suggestion (Comments 19), determining that the "additional costs" of transport and termination are zero for these purposes does not somehow imply that the *total element long run* incremental cost of switching and transport is zero for purposes of setting the rate that CLECs must pay when leasing an ILEC's network elements. TELRIC was adopted under a different statutory standard: the UNE cost standard of section 252(d)(1). The Commission's implementation of that provision in that context has no logical bearing on its authority to impose bill-and-keep as an appropriate intercarrier compensation mechanism.

Citing the Supreme Court's 1999 decision in *Iowa Utilities Board*, Focal suggests that, in adopting bill-and-keep for traffic covered by section 251(b)(5), the Commission would cross a perceived jurisdictional line dividing (1) the FCC's authority to issue general methodological rules from (2) the states' power to set particular rates. Focal

Comments 32-33; see generally Iowa Utilities Bd., 525 U.S. at 384. This argument is without merit. Bill-and-keep is a methodology, not a "rate." The Commission has no less authority to preclude intercarrier termination charges for all traffic than to preclude it for balanced traffic – or, for that matter, to preclude one carrier from charging another for the cost of originating a local call (as, indeed, it has already done, see 47 C.F.R. § 51.703(b)). More generally, the Supreme Court has made abundantly clear that the Commission has plenary authority to resolve broad methodological issues of national importance to the industry. The issue before the Commission here is as general and nationally significant as they come: whether the rationalized intercarrier compensation regime for the 21st century will be bill-and-keep or some version of CPNP. The Commission can and should resolve that issue in favor of bill-and-keep.

B. The Commission has authority to adopt measures encouraging states to move towards bill-and-keep for intrastate access traffic.

The Tenth Circuit recently held that, under sections 254(b)(3) and (b)(5), the Commission has not just an opportunity but an "obligat[ion]" to induce the states – by "carrot or . . . stick" – to do their part in ensuring comparable rates within their states.²²

The logic of the Tenth Circuit's ruling strongly indicates that the Commission has a more general authority to give the states appropriate inducements to make the transition from irrational, implicit funding mechanisms to the rational, explicit mechanisms required by section 254. Indeed, the very cornerstone of section 254 is the principle that, on both the interstate and the intrastate sides of the ledger, universal service should be funded not by ILECs alone through geographic rate-averaging and other implicit subsidies, but by "[a]II

 $^{^{22}}$ Qwest Corp. v. FCC, 258 F.3d 1191, 1204 (10th Cir. 2001) (internal quotation marks omitted).

providers of telecommunications services" through "equitable and nondiscriminatory contribution[s]" to explicit subsidy mechanisms.²³ Just as the Commission must "develop mechanisms to induce adequate state action" to fulfill the comparable-rate objectives of subsections 254(b)(3) and (b)(5),²⁴ so too must the Commission adopt mechanisms to induce state compliance with the core objective of subsections 254(b)(4), (e), and (f): a comprehensive transition by the FCC and the states to explicit, competitively neutral universal service programs.

Qwest therefore agrees with SBC (Comments 33-43) that the Commission can and should condition receipt of federal universal service funding on a state's willingness, over time, to remove all implicit subsidies from its intrastate access charges and to convert them into explicit intrastate funding mechanisms. That carrot is likely to be highly effective, since the federal fund will play a critical new role in replacing the implicit subsidies that section 254(g) now produces under the existing access charge regime and that the adoption of bill-and-keep would sensibly eliminate. Once the states transition away from those implicit subsidies, any residual attraction of retaining the existing intrastate access charge regime would be highly attenuated, because that regime could no longer be used as a competitively skewed source of funding for universal service. The way would then be cleared for the Commission to lead a national regulatory consensus in support of bill-and-keep.

Finally, even if some states were reluctant to adopt bill-and-keep, such that conventional access charges accompanied intrastate but not interstate access traffic, that

²³ 47 U.S.C. § 254(b)(4); see also 47 U.S.C. §§ 254(e) & (f).

²⁴ Qwest Corp., 258 F.3d at 1204.

reluctance would increasingly lead carriers to route traffic through digital networks (such as the Internet) in which "the interstate and intrastate components [of the traffic] cannot be reliably separated" – and that are thus categorically subject to the Commission's section 201 authority to impose bill-and-keep. *See ISP Reciprocal Compensation Order* ¶ 52. As discussed in Qwest's opening comments (at 46-47), and as also observed by SBC (Comments 42-43), that inevitable consequence of digital technology would make alternatives to bill-and-keep unsustainable in any jurisdiction over the long term.

CONCLUSION

For the reasons set forth here and in Qwest's opening comments, the Commission should adopt bill-and-keep for all traffic to the fullest extent of its jurisdiction.

Respectfully submitted,

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November 5, 2001

DECLARATION OF WILLIAM P. ROGERSON

submitted on behalf of Qwest Communications International, Inc.

November 5, 2001



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1. INTRODUCTION

I am William P. Rogerson. I am Professor of Economics at Northwestern University, where I am also Co-Director of the Center for the Study of Industrial Organization and Director of the Program in Mathematical Methods in the Social Sciences. I served as Chief Economist at the Federal Communications Commission from June 1, 1998 to May 31, 1999. I have also served on the Faculty of Economics at Stanford University and spent a year visiting the University of Chicago as an Olin Fellow at the Center for the Study of the Economy and State. I served as Chair of the Department of Economics at Northwestern from 1996-1998 and was elected a Fellow of the Econometric Society in 1999. In addition to conducting academic research, I have served as a consultant to a number of government agencies and non-profit organizations, including the Federal Trade Commission, the Institute for Defense Analysis, the Logistics Management Institute, the Office of the Secretary of Defense (Program Analysis and Evaluation), the RAND Corporation, and the U.S. Department of Justice.

I have been asked by Qwest Communications International, Inc. (Qwest) to read and analyze the record created thus far in the Commission's intercarrier compensation proceeding,² and to offer my views on the suitability of bill-and-keep as a basis for creating a new unified and efficient intercarrier compensation regime.³ I conclude that bill-and-keep would promote efficiency and enhance competition, both by rationalizing and unifying existing regulations, and

^{&#}x27;My curriculum vitae is attached as an appendix to this Declaration.

²This proceeding was initiated by a Notice of Proposed Rulemaking issued by the Commission on April 27, 2001. *Developing a Unified Intercarrier Compensation Regime*, Notice of Proposed Rulemaking, CC Docket No. 01-92, FCC 01-132 (rel. Apr. 27, 2001) (NPRM).

³"Bill-and-keep" refers to a regime whereby a carrier recovers its network costs primarily, if not exclusively, from its end users, rather than interconnecting carriers.

by allowing the Commission to deregulate termination prices and certain other key prices charged by non-dominant carriers. Such a regime would be superior to one based on calling party's network pays (CPNP). While the main advantages of bill-and-keep would be captured by the basic bill-and-keep regime described by the Commission in its NPRM and the accompanying staff paper by DeGraba, the proposal outlined by Qwest in its reply comments to modify the basic regime by moving to a division of financial responsibility at the "edge of the network" offers some extra advantages that make it a particularly desirable choice. In this Declaration, I explain the major advantages that a basic bill-and-keep regime offers, the extra advantages that Qwest's "edge of the network" proposal offers, and, finally, why the arguments advanced by opponents of bill-and-keep are incorrect, insignificant, or properly dealt with by simple safeguards and rules.

2. EXECUTIVE SUMMARY

In its recent NPRM on intercarrier compensation regimes, the Commission begins its reexamination of all currently regulated forms of intercarrier compensation by observing that the current system is a crazy patchwork of regulations that treat the same types of economic transactions in very different ways depending upon factors which make no essential economic difference. When one carrier hands off a telephone call to another carrier, existing regulations might require that the first carrier compensate the second carrier, that the second carrier compensate the first carrier, or that neither compensate the other, all depending upon

⁴See Patrick DeGraba, *Bill-and-keep at the Central Office as the Efficient Interconnection Regime*, OPP Working Paper 33, December 2000 (DeGraba 2000).

⁵Reply Comments of Qwest Communications International, Inc., *Developing a Unified Intercarrier Compensation Regime*, CC Docket No. 01-92 (Nov. 5, 2001) (Qwest Reply Comments).

economically irrelevant factors such as whether the call is viewed as local or long distance, whether the carriers are local carriers or long distance carriers, whether the carriers are wireline or wireless carriers, and whether the call ultimately terminates at an Internet service provider (ISP) or not. The Commission observes that the current system creates distortions and arbitrage opportunities by treating what are essentially similar transactions in such disparate ways. These arbitrary distinctions bias technology choices, pick winners and losers in advance, and at times encourage firms to make massive investments simply to earn arbitrage profits rather than to accomplish any real productive purpose. In this NPRM, the Commission sets out toward the ambitious and laudable goal of subjecting this patchwork of regulations to a searching and thorough analysis and to replace it, to the extent possible, by a single unified regime explicitly designed to promote efficiency and competition and minimize the need for regulatory intervention as competition continues to develop.

In particular, in the NPRM and an accompanying staff paper by DeGraba 2000, the Commission suggests that bill-and-keep might provide the basis for creating such an efficient unified system. Under bill-and-keep, local carriers are not allowed to charge interconnecting carriers for the local carriers' own costs of originating and terminating calls within the local network. Rather, they must look to their own end-users for recovering these costs. Different types of bill-and-keep regimes can be created by varying either the definition of what facilities are viewed as being local access facilities or the default responsibilities of carriers to provide

In this paper I will use the term "local carrier" to refer to any carrier providing end users with a direct link to the public switched network through a loop and end office switch or the functional equivalent of such facilities. This term includes incumbent local exchange carriers, competitive wireline local exchange carriers, and providers of wireless service. I will use the term incumbent local exchange carrier (ILEC) as it is used in the Communications Act of 1934, as amended. See 47 U.S.C. § 251(h).

transport between networks. In its reply comments, Qwest suggests one modification to the basic bill-and-keep proposal described by the Commission, by suggesting that the definition of local access facilities be expanded to included tandem switches serving end offices and transport between tandem switches and end offices (when such tandems exist). Qwest describes this approach as an "edge of the network" default division of financial responsibility since this modification essentially expands the definition of local access facilities outwards to the edge of the local carrier's network.

Moving to a bill-and-keep regime offers three main advantages.⁷ First, a bill-and-keep regime is significantly less regulatory than the current regime because, under bill-and-keep, there is no need to regulate termination prices charged by non-dominant carriers. Second, certain severe regulatory arbitrage problems that occur under the current regime can be completely avoided under a bill-and-keep regime. Third, under the Qwest proposal, it should be possible to reduce regulation of the transport prices that ILECs charge interconnecting carriers.

First, bill-and-keep is significantly less regulatory than the current regime because it eliminates the need to regulate termination prices charged by non-dominant carriers.⁸ As will be discussed below, even in very competitive telecommunications markets where there are large numbers of competing local carriers, it will still be necessary for government to regulate the termination prices that non-dominant local carriers charge other firms, due to the terminating monopoly problem. However, there is no need to regulate termination prices that non-dominant

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⁷The first two advantages of bill-and-keep apply to both the DeGraba 2000 and Qwest proposals and, in fact, to almost any sensibly designed bill-and-keep regime. The third advantage applies to the Qwest proposal but not to the DeGraba 2000 proposal.

⁸As will be discussed in Section 4.1.4, a similar argument can also be made with respect to origination prices charged by non-dominant local carriers for long distance calls; these must be regulated under the current regime but could be deregulated under a bill-and-keep regime.

local carriers charge their own end users, because competition for these end users will itself control prices. Because even very good regulators will never be able to obtain sufficiently detailed, accurate, or timely information to set all prices equal to their perfectly efficient levels, regulation can never be expected to create the same incentives for efficiency that can be created by competitive markets. This is particularly true in industries such as telecommunications where technology is evolving rapidly and where there is a need for flexibility and experimentation with pricing structures and business models. And regulation is costly. Therefore, the fact a bill-and-keep regime would allow the Commission to let competition set prices that would otherwise have to be set by regulation is a significant advantage. That is crucial because, in the NPRM, the Commission states that one of its goals is to identify a system that "minimizes the need for regulatory intervention, both now and as competition continues to develop."

Second, a particularly serious and pernicious arbitrage problem that arises under the CPNP regime can be completely avoided by switching to a bill-and-keep regime. To the extent that termination prices that carriers are allowed to charge other carriers are set above the actual cost of providing termination in a CPNP regime, incentives are created for CLECs to invest in facilities that allow them to serve end users such as ISPs that primarily receive calls but do not originate calls, even if the CLECs are not the lowest cost service providers. Furthermore, because these termination fees paid by the originating carrier are not passed back to end users making the calls, such high prices do not automatically sow the seeds of their own destruction by creating incentives for end users to try to avoid using ISPs served by CLECs that charge these high fees.

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⁹ See NPRM at 3.

Third, the bill-and-keep system proposed by Qwest should allow the Commission to significantly deregulate ILEC provision of transport services to interconnecting carriers. This is because the Qwest proposal relieves interconnecting carriers of the responsibility to purchase transport deep within the ILEC network in order to deliver calls to every end office of the ILEC. Instead, under the Qwest proposal, interconnecting carriers are permitted to relinquish financial responsibility for traffic at the ILEC tandem. It is much more likely that competitive alternatives will be available for the more limited amount of transport that interconnecting carriers will be required to provide under the Qwest proposal.

The remainder of this Declaration proceeds as follows. Section 3 describes the broad outlines of the Qwest proposal for implementing a bill-and-keep regime. Section 4 discusses the three main advantages of moving to such a regime. Section 5 considers the potential problems with moving to a bill-and-keep regime that have been identified by various parties in the first round of comments of this proceeding. I show in each case that these problems are either incorrect or insignificant or that simple modifications can be made to the basic bill-and-keep regime to deal with them. Finally, Section 6 draws a brief conclusion.

3. QWEST'S BILL-AND-KEEP PROPOSAL

In this section, I will describe the main features of the Qwest proposal for a bill-and-keep regime. The proposal is described in more detail in Qwest's reply comments. Although the Qwest proposal supplements, expands upon, and clarifies the DeGraba 2000 proposal in a number of ways, it is similar in broad outline to the DeGraba proposal with one main exception. This is that Qwest proposes that the definition of local access facilities (i.e., network assets whose costs must be recovered from a local carrier's own end users) be expanded to include the tandem switch serving the end office, and transport between the tandem switch and end office, in

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addition to the end office and loop. More specifically, Qwest proposes that, if an interconnecting carrier chooses to drop off a call at a tandem switch serving the called party's end office instead of directly at the end office, the terminating carrier would be responsible for recovering all termination costs beyond that point, including tandem switching and transport between the tandem and end office. Qwest refers to this approach as an "edge of the network" default division of financial responsibility, since this modification essentially expands the definition of local access facilities outwards to the edge of the local carrier's network.

There are two main advantages of the Qwest proposal over the DeGraba 2000 proposal. First, it places less onerous default transportation obligations on CLECs (and other non-ILEC local carriers), and therefore will encourage the growth of competition in local telecommunications markets. ILECs have historically constructed hierarchical networks, where multiple end office switches connect to a tandem switch. However, many other local carriers have chosen to build "flatter" network structures with no tandems, fewer end offices, but longer loops. This means that an area that an ILEC serves with multiple end offices connecting to a single tandem will often be served by another local carrier, such as a CLEC, with a single end office. The DeGraba proposal has the effect of imposing asymmetric transportation obligations on the CLEC and ILEC in such a case: The ILEC is typically required to deliver calls only to a single location in the CLEC's network while the CLEC is required to deliver calls to multiple end offices in the ILEC's network, even though both networks are serving the same area. By contrast, the Qwest proposal would reduce the transport obligation of the CLEC so that it is more symmetric to the transport obligation of the ILEC.

To the extent that the Qwest proposal reduces CLECs' costs of exchanging traffic, it would encourage the growth of the CLEC industry and therefore speed the overall growth of

competition in local telecommunications markets. In particular, the Qwest proposal, as compared to the DeGraba 2000 proposal, would reduce the extent to which an ILEC could prevent entry or induce exit of CLECs simply by refusing to negotiate efficient two-way trunking arrangements. Therefore, the Qwest proposal would reduce any potential incentives that ILECs might have to refuse to negotiate efficient transport arrangements, relative to the DeGraba proposal.

The second advantage of Qwest's proposed change to the DeGraba 2000 proposal is that it will allow the Commission to further deregulate prices that ILECs charge interconnecting carriers for transport. This issue will be discussed in detail in Section 4.

4. THE MAIN ADVANTAGES OF MOVING TO A BILL-AND-KEEP REGIME

4.1 Bill-and-keep eliminates the need for regulation of termination prices charged by non-dominant carriers.

4.1.1. The terminating monopoly problem.

Among economists that study telecommunications, it is a well understood and completely accepted fact that local carriers will set termination fees too high if they are allowed to charge those fees to calling parties.¹⁰ The reason is that the local carrier has a sort of "monopoly" with respect to the property right of being able to terminate calls to any of its end users. Therefore, the local carrier will find it profit-maximizing to raise its prices above cost in order to take advantage of this monopoly power. So long as end users of the local carriers care more about minimizing the prices that they pay the local carrier than about minimizing the prices that callers

¹⁰See the various articles and books cited below.

to them pay, unregulated termination prices will be inefficiently high no matter how much *ex* ante competition there is for end users among the local carriers.

There are at least three reasons why it is reasonable to expect that consumers will care more about minimizing the prices they themselves pay than about minimizing the prices that parties calling them pay. First, unless there is some direct business relationship between the two parties or they are part of the same family unit, an end user will lose no money himself if a party calling him (or the calling party's carrier) has to pay more. Rather, the only possible negative effect on the called party is that that party may receive fewer calls, which does not capture the full cost of higher rates experienced by the calling party. Second, as will be discussed in more detail in section 4.1.3 below, under current institutional arrangements following largely from state regulations, even this effect generally does not exist. This is because local carriers charge termination fees to other carriers and these carriers generally are not allowed to flow back termination charges to their end users making the call. Therefore an end user choosing a local carrier will quite rationally predict that (under current institutional arrangements) the local carrier's higher termination prices to the calling party's carrier will NOT reduce the number of calls the end user receives. Third, even if a system where charges could be flowed back to calling end users were instituted, higher termination charges on calling parties would reduce the number of calls an end user receives only to the extent that calling parties had sufficiently good information to be aware of the termination charges that every different local carrier charged and

[&]quot;For example, suppose a calling party reduced its calling very little in response to a price increase but instead simply spent more. The calling party would still be worse off by the extra amount it was paying, but the called party would not perceive that there was any harmful effect of the price rise.

which local carrier each of the people they called subscribed to. Consumer information on this issue is likely to be far from perfect.

Experience in Great Britain confirms that end users do not seem to place much weight on the issue of termination charges levied on others when they choose a telephone provider. In Great Britain, wireless phone operators charge termination fees directly to the calling party. The British regulatory authority, Oftel, has found that users of mobile phones pay very little attention to the size of these termination fees when they choose their carrier and, in fact, generally do not even know what they are.

Generally, Oftel survey data . . . suggests that residential mobile phone owners are mostly driven by cost when it comes to choosing their mobile phone network. However, they appear to place very little weight on the price of calling their mobiles when they choose their mobile network. Only 15% of potential subscribers found out how much it would cost to call their mobile, and this cost was not thought to be a significant factor in their choice of a network. This survey data also suggested that even if it was a significant factor, they might face difficulty in getting and understanding information on costs of calling mobiles.¹²

One of the first academic papers that I am aware of that described the terminating monopoly problem was by British economist Mark Armstrong, who built a model along these lines in order to explain why he thought that the British government needed to regulate the termination prices that wireless telephone companies charged to calling parties even though the market appeared to be quite competitive.¹³ Armstrong was recently invited to write the chapter on network interconnection for the forthcoming *Handbook of Telecommunications Economics*,

¹²See Oftel, Review of the Price Control on Calls to Mobiles - A Consultive Document Issued by the Director General of Telecommunications, 9-10 (February 2001) (available at www.oftel.gov.uk/publications/mobile/ctom0201.htm) (Oftel 2001).

¹³Mark Armstong, "Mobile Telephony in the U.K.," (September 1997), Nuffield College, Oxford.

and his analysis of the terminating monopoly problem occupies one of three major sections in his chapter. He summarizes his findings as follows:

[W]hen a subscriber signs up with a network, that network has a monopoly over delivering calls to the subscriber, and it can extract monopoly profits from the callers to this subscriber. Even if the market for subscribers is intense, so that overall profits are eliminated in the sector, these monopoly profits - and the consequent deadweight losses - persist.¹⁴

In their recent book on Competition in Telecommunications, Laffont and Tirole draw the same conclusion:

It is worth recording here the common fallacy that small players do not have market power and should therefore face no constraint on their termination charges. This fallacy results from a misunderstanding of the definition of a market. A network operator may have a small market share in terms of subscribers; yet it is still a monopolist on the calls received by its subscribers.¹⁵

Furthermore, this problem is not merely theoretical. In Great Britain, when termination prices that mobile networks were allowed to charge calling parties were unregulated, networks charged high termination fees that were clearly above cost, and this forced the British government to step in and regulate these rates. In a recent statement, Oftel, the British regulatory authority, sums up the problem as follows:

The overall effect of the calling party pays principle in the retail market is that, whereas mobile networks have an incentive to keep the price of those services required and paid for by the mobile owner at a level to attract and retain customers, they have less incentive to keep the price of calls to mobiles low because the callers cannot take their business elsewhere if dissatisfied (the caller has to use that network to reach that particular phone number). . . . Overall, Oftel's view is that the calling party pays principle results in there

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¹⁴See Mark Armstrong, "The Theory of Access Pricing and Interconnection," in *The Handbook of Telecommunications Economics*, North Holland (forthcoming 2001), section 3, at 40 of manuscript version dated February 2001.

¹⁵Jean-Jacques Laffont and Jean Tirole, *Competition in Telecommunications*, MIT Press, Cambridge, 2000, at 186 (emphasis in original).

being limited incentive for the [wireless providers] to reduce charges to the competitive level; rather there is an incentive for [wireless providers] to keep them high.¹⁶

As the above Oftel quote explains, the source of the problem when local carriers are allowed to charge terminating prices to people other than their own end users is that the person choosing the local carrier is NOT the person paying the termination prices. Therefore, termination prices will not play a significant enough role in the end user's selection of a local carrier, and termination prices will be inefficiently high. This problem obviously does not apply if the end user himself is paying the termination charges, and this is why there is no need to regulate termination prices that local carriers levy on their own end users. In this case, the person choosing the local carrier is the person paying the termination price, so competition will result in termination prices being competed down to cost.

4.1.2. When carriers cannot pass through terminating charges to calling parties, the terminating monopoly problem is exacerbated.

It is obvious that the terminating monopoly problem grows even more severe if local carriers are allowed to charge terminating prices to other carriers and these other carriers are not allowed to pass through these terminating prices to their own end users. In such a case, callers view the terminating price as zero no matter how high it gets, and therefore callers' demand to place calls remains high even if the local carrier raises prices. This creates an extraordinarily high incentive for local carriers to raise termination prices.

This is precisely the situation that exists for both long distance and local calls. For the case of long distance calls, existing pricing regulations require IXCs to charge an average rate for all their calls independent of the termination charges that are actually levied for a particular call.¹⁷

¹⁶See Oftel (2001) at 9.

¹⁷See 47 U.S.C. § 254(g).

With respect to long distance termination prices, local carriers are therefore in the enviable position that IXCs that provide services nationwide such as AT&T will continue to charge exactly the same prices to reach their end users regardless of how high the local carrier raises its termination prices. Until very recently, the termination prices that CLECs charged IXCs were completely unregulated. The Commission was forced to begin regulating these prices precisely because such carriers had no incentive to keep these prices low.¹⁸

For the case of local calls, state regulatory commissions, generally speaking, require ILECs to charge a flat rate for all local calls. Therefore, end users of the ILEC calling end users of another local carrier view the incremental cost of the call to be zero regardless of how high the other local carrier raises its termination prices. Since the termination prices that local carriers are allowed to charge ILECs have always been regulated, we have not observed the same extraordinarily high prices that occurred in the previously unregulated market for CLEC termination of long distance calls. But precisely the same logic applies, and we can be sure that a local carrier would have an extremely strong incentive to raise its local termination rates charged to other carriers to very high levels if these rates were unregulated. Therefore there will be a permanent need for regulation of termination prices so long as local carriers are allowed to charge these prices to other carriers rather than their own end users.

4.1.3. When interexchange carriers cannot pass through originating access charges to their end users, then originating access charges by non-dominant carriers must be regulated.

The same type of problem described above for the case of terminating fees also exists for originating fees. That is, if a local carrier (even if non-dominant) is allowed to charge

¹⁸Reform of Access Charges Imposed by Competitive Local Exchange Carriers, Seventh Report and Order and Further Notice of Proposed Rulemaking, CC Docket No. 96-262, FCC 01-146 (rel. Apr. 27, 2001) (CLEC Access Charge Order).

origination fees to an interconnecting carrier and the interconnecting carrier is not allowed to flow back these charges to the calling party, the carrier will have an incentive to raise these origination fees above the competitive level. This is precisely the situation that exists with respect to originating long distance access charges. The same regulation that requires IXCs to charge an average termination fee (as part of their long distance rates) across all their end users also requires them to charge an average origination fee across all of their end users. Therefore, if a particular local carrier raises the originating access charges that it levies on IXCs, IXCs are not allowed to respond by raising the long distance prices they charge to end users of that particular local carrier. Rather, the IXCs must continue to charge an average rate that reflects the origination costs they experience across all their end users. Therefore, in effect, a small local carrier can raise its originating access charges without affecting the prices its end users pay for long distance service at all. This, of course, gives the local carrier a powerful incentive to raise originating access charges.

Of course, no such incentive exists under a bill-and-keep regime because, in this case, the local carrier charges origination fees directly to its own end users. Therefore, so long as the local carrier is non-dominant, competition among local carriers for end users will control these prices.

4.1.4. The costs of regulating non-dominant carriers.

It is impossible for regulation to set all prices equal to correctly calculated forward looking costs because the task is simply too complicated and requires too much information.

The job of the regulator is not simply to discover the one correct per-minute rate that all carriers should charge for all types of traffic for all time. The constant introduction of new products and

¹⁹See 47 U.S.C. § 254(g).

technologies means that underlying cost conditions are always changing and that the regulatory system must be constantly responding to new issues and problems. To complicate matters further, the cost of end office switching is in many ways a peak load cost: *i.e.*, the main cost is building capacity and there must be enough capacity to meet peak demand. In such cases, it is likely that even more complex pricing schedules using time-of-day pricing are likely to be efficient. The chance of even very good regulators being able to get this even more complex problem right grows even smaller.

4.2 Bill-and-keep eliminates severe arbitrage problems that occur under CPNP.

Recent events surrounding the issue of ISP-bound traffic²⁰ illustrate a particularly serious and pernicious arbitrage problem that arises under the CPNP system that could be completely eliminated by switching to a bill-and-keep regime. The problem occurs when local carriers are able to find a class of end users that primarily receive calls and the per-minute cost to the local carrier of terminating the traffic is less than the regulated termination rate set by government. In such a case, these end users will become virtual "money pumps" for local carriers since they are able to earn a profit on every minute of incoming traffic and this is not counterbalanced by payments for traffic in the opposite direction.

In retrospect, it now appears that the termination rates that CLECs were allowed to charge ILECs for terminating ISP-bound traffic were well above their actual cost of providing termination. This created an incentive for CLECs to invest in facilities that allowed them to

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²⁰See Implementation of the Local Competition Provisions in the Telecommunications Act of 1996 and Intercarrier Compensation for ISP-Bound Traffic, Order on Remand and Report and Order, CC Docket Nos. 96-98 and 99-68, FCC 01-131 (rel. April 27, 2001), for the Commission's most recent order on this subject and a history of events leading up to the current situation.

serve ISPs, not because they were necessarily more efficient providers of service to ISPs, but because government regulations allowed them to earn a price well above cost for serving ISPs.

Because the existing regulatory structure did not allow ILECs to pass these termination charges back through to their own end users, the fact that CLECs charged high termination prices had no effect at all on the demand of the ILECs' end users for the services of ISPs served by CLECs.

Years after the problem became apparent, and years after CLECs had invested large amounts of money to serve and attract this group of end users, the regulatory process finally ground into action, and the Commission recently decided to lower the termination rate that local carriers are allowed to charge for ISP-bound traffic. While it appears that this particular arbitrage problem created by this particular class of traffic may now have been substantially dealt with, massive distortions in business investment decisions occurred in the meantime.

Furthermore, new pricing problems will likely arise in the near future and may cause equally severe problems before government is able to respond to them. One new problem on the horizon concerns paging companies. Under Commission regulations, paging companies are viewed as local carriers that only terminate traffic. Therefore, under the existing CPNP regime, they are entitled to charge other local carriers termination fees. The cost of terminating traffic for paging companies is considerably less than the normal termination price that regular local carriers are allowed to charge. Thus, if paging companies were allowed to charge this regular price, every paging end user would become a "money pump" for the paging company. Paging companies would have an incentive to pay people to become their end users and to pay other people to page the first group of people. The Commission was aware of this problem and dealt with it a number of years ago by specifying that paging companies would only be allowed to

charge a special extremely low terminating price.²¹ Based on conversations with Qwest staff, I have become aware that instances are now arising where paging companies are attempting to avoid this regulation by becoming end users of CLECs. Under this new arrangement, paging traffic runs from the end users of the ILEC to end users of the paging company through the CLEC, and the CLEC is attempting to charge the regular high termination price for this traffic. Once again, even if the Commission eventually is able to respond to this arbitrage opportunity by making a one-time piecemeal adjustment to the regulated price of termination for one more class of traffic, there will be dislocations of investment in the meantime. Furthermore, another new arbitrage opportunity is likely to come along as soon as this one is solved.

4.3 Bill-and-keep will allow further deregulation of transport prices that ILECs charge to other carriers.

Another advantage of bill-and-keep is that it will allow further deregulation of transport prices that ILECs charge interconnecting carriers. To understand the reason for this, one may view the market for intra-LATA transport purchased by interconnecting carriers as being divided into two segments: (i) transport between the ILEC's tandem switches and subtending local switches, and (ii) transport from other local carriers' end offices to the ILEC tandem. Alternate sources of supply to the ILEC are much more likely to exist for market segment (ii) than market segment (i), because the higher levels of traffic and greater number of interconnecting carriers at tandems have generally encouraged more alternate providers to build transport facilities to tandems. Under a properly structured bill-and-keep regime, carriers are no longer required to purchase items in market segment (i) from the ILEC in order to exchange traffic with the ILEC.

²¹See Implementation of the Local Competition Provisions in the Telecommunications Act of 1996; Interconnection Between Local Exchange Carriers and Commercial Mobile Radio Service Providers, CC Dockets No. 96-98, 95-185, 11 FCC Rcd 15499, 16043-44 ¶¶ 1092-93 (1996).

Instead, the ILEC directly sells these services to end users under prices that are regulated as part of end user charges so long as the ILEC is deemed to be dominant. However, interconnecting carriers will still continue to purchase items in the second market segment from the ILEC. Because the ILEC is less likely to have market power in this segment due to the comparatively greater availability of transport from IXCs, other LECs, CAPs, etc., the Commission may deem it more appropriate to deregulate ILEC provision of transport to interconnecting carriers. Therefore the advantage of moving to a bill-and-keep regime is that, by separating market segment (ii) from market segment (iii), it removes any obstacles to deregulation of market segment (iii).

5. ARGUMENTS RAISED BY OPPONENTS OF BILL-AND-KEEP ARE INCORRECT, INSIGNIFICANT, OR PROPERLY ADDRESSED THROUGH SIMPLE SAFEGUARDS AND RULES

5.1 It is preferable to replace regulation with competition where possible instead of merely attempting to more accurately set regulated prices equal to forward-looking cost.

Janus Ordover and Robert Willig, on behalf of AT&T, argue that most of the arbitrage problems that occur under the CPNP system could be solved if regulators were able to do a perfect job of always setting all regulated prices equal to correctly defined forward-looking cost.²² I think that Ordover and Willig are basically correct that, in theory, if regulators had enough information, time, and knowledge to set all prices equal to their theoretically perfect values, regulation would then work quite well. In fact, since the "perfect values" for prices are by definition the values that competitive markets would set, the statement that "perfect" regulation is just as good as competitive markets is really more of a definition of what is meant by perfect regulation than a statement with any real economic content.

²²Janus Ordover and Robert Willig, August 20, 2001, "Declaration of Janus A Ordover and Robert D Willig on Behalf of AT&T Corp.," (Ordover and Willig), section VI.

I am a bit puzzled as to why Ordover and Willig think that the observation that CPNP would work quite well if it could be paired with a theoretically perfect regulatory process creates a justification for CPNP. As I have stated above, one of the main advantages of moving to a bill-and-keep regime over a CPNP regime is that it reduces the need for regulation. In particular, there is no need to regulate termination fees charged by non-dominant carriers under bill-and-keep, but these fees must be regulated under CPNP. I agree with Ordover and Willig that if regulation could always produce theoretically perfect prices, then there would be no real need to replace regulation by competition where this is possible. My main point is that it is impossible for regulation to achieve this ideal of theoretical perfection and that it therefore makes sense to substitute competition for regulation when this is possible. Therefore, while I agree that CPNP would work fairly well if regulation could always set theoretically perfect prices, I disagree strongly that this statement somehow provides a justification for CPNP.

In other parts of their declaration, Ordover and Willig in fact acknowledge precisely this point - that it is not realistic to expect that regulation will always get prices perfectly correct.

Their declaration includes the following two statements:

We recognize that it is no easy or error-free task for regulators to estimate costs and set rates. The many "bumps in the road" to cost-based reciprocal compensation rates illustrate the difficulties regulators face in a world of imperfect and asymmetric information. We are therefore entirely sympathetic to the desire to find a regime that can remedy existing market distortion but that would not require rate regulation.²³

We recognize, of course, that setting cost-based rates that replicate competitive market outcomes is no simple task, and we are strong proponents of a first principle of economic regulation that such ratemaking should not even be attempted if markets and competition can be relied upon to accomplish these goals instead.²⁴

²³Ordover and Willig at 9.

²⁴Ordover and Willig at 6.

Therefore even Ordover and Willig seem to acknowledge that it is highly desirable to implement policies that allow competition to set prices rather than regulation when this is possible.

Replacing the current CPNP regime with a bill-and-keep regime accomplishes this result.

5.2 Bill-and-keep is deregulatory because it allows deregulation of termination prices charged by non-dominant local carriers.

Both Ordover and Willig,²⁵ and DeGraba 2001 in his paper filed on behalf of WorldCom,²⁶ make the argument that bill-and-keep is no more deregulatory than CPNP because there will be an equal need to regulate dominant ILECs under either regime. As I have stated many times in this paper, the main reason that bill-and-keep is more deregulatory than CPNP is NOT principally because it allows less regulation of ILECs (although it accomplishes that as well, as discussed in section 4.3), but rather because it allows less regulation of non-dominant local carriers. Therefore, the argument that there is an equal need to regulate the ILEC under both regimes does nothing to contradict or weaken the argument of this paper that bill-and-keep is less regulatory because it allows for considerably less regulatory oversight of non-dominant local carriers. The significant regulatory distortions and arbitrage opportunities that I have described in this paper flow from the fact that regulation has failed to set termination prices charged by non-dominant carriers at the correct levels. Moving to a bill-and-keep regime will rectify these serious problems because competition will then be able to determine these prices.

Furthermore, moving to a bill-and-keep regime will reduce regulatory uncertainty by creating a more stable regulatory structure that does not need to constantly change as new

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²⁵See Ordover and Willig, section III.

²⁶See Patrick DeGraba, August 20, 2001, "Implementing Bill and Keep Intercarrier Compensation When Incumbent LECs Have Market Power," Declaration of Patrick DeGraba, filed on behalf of WorldCom (DeGraba 2001) at 5.

regulatory arbitrage opportunities created by the CPNP system become apparent and are dealt with on a piecemeal basis. This reduction in regulatory uncertainty will itself create a more favorable environment for local carriers to compete in, thereby increasing investment in such carriers.

5.3 Bill-and-keep will not increase the ability of incumbent ILECs to discriminate against unaffiliated IXCs by exercising control over the transport of originating traffic.

The argument that a bill-and-keep regime might give ILECs an extra opportunity to disadvantage unaffiliated IXCs is made most completely by DeGraba 2001 in a paper filed on behalf of WorldCom. DeGraba 2001 correctly observes that, under the DeGraba 2000 proposal, the ILEC would have the default financial responsibility to transport originating traffic between the ILEC end office and the IXC POP. This is also true under the Qwest proposal. DeGraba 2001 is also correct in noting that this would represent a change from the current regime, under which the IXC has default financial responsibility for both directions of traffic between the IXC POP and the ILEC end office. DeGraba 2001 suggests that this change in responsibility could raise new problems for IXCs under the following scenario, which I will call the DeGraba 2001 Scenario.

The DeGraba 2001 Scenario

Suppose that the end office of an ILEC and the POP of an IXC are currently connected by a two-way trunk owned by the IXC and that this is the most efficient interconnection method. Now suppose that, after the implementation of bill-and-keep, the ILEC insists on routing originating traffic through the ILEC tandem and transporting the traffic itself to the IXC POP using its own facilities. It then charges the IXC's end users for this service. This creates three problems for the IXC, according to DeGraba 2001. First, the ILEC is able to block originating traffic in ways that neither the IXC nor the regulator can monitor or prevent, causing the IXC's service quality to deteriorate. Second, the IXC has a more difficult time being competitive on price because the ILEC now charges the IXC's end users high prices for origination, reflecting the (inefficient) one-way transport route it insists on using. Third, the IXC now has excess transport

capacity which it cannot sell or lease because the ILEC refuses to use it and there is no other use for this transport capacity.

A bill-and-keep regime is unlikely to create significant problems of the sort DeGraba 2001 describes. First, with respect to the issue of call blocking, based on conversations I have had with Qwest staff, I believe that the service quality concern would be largely resolved by simple safeguards that required the ILEC to treat traffic bound for unaffiliated IXCs in a nondiscriminatory fashion relative to traffic bound for its own long distance affiliate. For example, the ILEC could be required to provide direct trunking on a non-discriminatory basis. As another example, for long distance traffic taken through the tandem, the ILEC could be required to transport traffic of its own affiliate on the same trunks that it uses to transport the overflow traffic of other IXCs so all traffic would be subject to the same rate of call-blocking. In particular, even when a direct trunk exists to carry traffic from a particular end office, overflow traffic is typically carried on non-dedicated trunks that flow through the tandem; a natural and simple safeguard would be to require the ILEC to carry all such overflow traffic (including the overflow traffic of its own affiliate) on the same trunks.

Second, with respect to the issue of raising the IXC's costs, once again, safeguards requiring the ILEC to treat all IXCs (including its own affiliate) in a non-discriminatory fashion would largely deal with this problem. Furthermore, DeGraba 2001's concern would not be significant even in the absence of such safeguards. DeGraba 2001's argument assumes that the ILEC will be able to pass along all of the costs of its inefficient transport choice to IXC end users. (This is why costs to IXC end users are raised.) That is, DeGraba 2001 assumes that the ILEC will be automatically allowed to pass through any increases in transport costs that it incurs by purposely choosing an inefficient transport method. If an ILEC is subject to rate-of-return regulation and if the ILEC incurs more costs, it would have a basis to argue that rates should be

raised to recover these costs. However, even in a pure rate-of-return system, an ILEC would have to justify that these costs are reasonable and necessary, and this might be hard to do in a situation where the ILEC is purposely not using an already-constructed two way trunk that is generally acknowledged to be the most efficient method of transport. More important, recovery of interstate costs by larger ILECs is currently regulated under a price cap regime that does not automatically allow pass-through of costs. That is, under the regulatory regime actually in existence for these carriers, the ILEC is not allowed to raise its prices if its costs go up; conversely it is not required to lower its prices if its costs go down. Therefore, assuming that the Commission does not make some radical break with its previous policies, the prices that larger ILECs will be allowed to charge end users for transport will be regulated according to some sort of price cap system. In particular, this means that ILECs will not be able to raise their prices simply by switching to more inefficient transport methods.

Third, with respect to the stranded assets issue, any sudden excess supply of capacity on the part of an IXC will be matched by an equal excess demand for capacity on the part of the ILEC that now has the responsibility to transport the traffic. The same amount of traffic will still need to be transported after the change, and the same amount of capacity will still exist to transport it. Therefore, there should be a resale market for the IXC's excess capacity if the IXC turns out to have a significant amount of such excess capacity.

5.4 Bill-and-keep will not increase the ability of incumbent LECs to engage in price discrimination against unaffiliated IXCs.

DeGraba 2001 discusses extensively the argument that bill-and-keep will enable ILECs to engage in price discrimination against unaffiliated IXCs.²⁷ He begins with an example where

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²⁷DeGraba 2001, section 3.

an ILEC disadvantages a rival IXC by charging users of its own long distance service a lower per-minute rate for local origination than it charges users of rival IXCs' long distance services. However, he then immediately acknowledges that a simple rule stating that the ILEC is not allowed to discriminate in this fashion would solve this problem and that the Commission would surely pass such a rule.²⁸ I agree with this conclusion.

DeGraba 2001 then proceeds to a more subtle example of discrimination. He considers a case where an ILEC offers to sell a "bucket" of long distance minutes for a flat fee to end users that use the ILEC's own long distance service but continues to charge a per-minute fee to end users for local origination that use rival IXCs' services. He correctly observes that it will be more difficult to make some unambiguous determination of whether or not such a scheme is discriminatory and concludes that situations like this could make it difficult for regulators to determine whether or not the ILEC is discriminating against rival IXCs. While I think this observation is generally correct, I also think that it is completely irrelevant to the issue of comparing a bill-and-keep regime with a CPNP regime. The reason is that exactly the same sorts of "fuzzy" situations could arise under a CPNP system. For example, under a CPNP system an ILEC could choose to offer its own end users a "bucket" of long distance minutes and simultaneously charge a per minute access rate to rival IXCs. Exactly the same difficulties with determining whether or not such a system is discriminatory would arise. More generally, any non-discrimination requirement enforced in a CPNP system by requiring the ILEC to charge the same access fees to all carriers could be equally well enforced in a bill-and-keep system by requiring the ILEC to provide all end users the same access fee options, irrespective of their choice of IXC.

²⁸DeGraba 2001 at 20.

5.5 Bill-and-keep will not create worse incentives for efficient use of the telephone network.

A number of the papers submitted by economists in the first round of this proceeding attempt to argue that having the calling party pay for all of the costs of a call will cause more efficient usage of the phone system than having the called party pay for at least a share of the costs of a call, as occurs under bill-and-keep.²⁹

It is useful to begin by recalling what DeGraba 2000's main point is on this issue. It is NOT that a bill-and-keep system will definitely induce superior decisions regarding short run use of the telephone network than will CPNP. Rather, his point is much more modest than this; it is simply that no clear conclusions can be drawn in this regard and that the significant advantages that bill-and-keep exhibits in other areas therefore justify its adoption.

More specifically, his point is that, in general, good incentives for short run use of the telephone network will be created when the costs of making phone calls are allocated in proportion to the average relative benefits of telephone calls. Under a CPNP system, the calling party pays for 100 percent of the call. Under a bill-and-keep regime, the calling party pays for less than 100 percent of the call but more than 50 percent of the call. (The precise share depends on the nature of the transport rule that is chosen.) DeGraba 2000's point is simply that recitations of examples where calling parties generally receive more benefits than called parties provide no scientific or empirical basis for predicting that one of these two regimes will create better incentives than the other. For example, suppose we viewed a recitation of examples as

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²⁹See Ordover and Willig, section IV; Lee Selwyn and Scott Lundquist, "Efficient Intercarrier Compensation Mechanisms for the Emerging Competitive Environment," August 2001, paper submitted on behalf of Focal, Pac-West, RCN, and US LEC (Selwyn and Lundquist) at 44-47; and Joseph Farrell and Benjamin Hermalin, "Analysis of Central Office Bill and Keep," August 2001, paper submitted of behalf of Time Warner, (Farrell and Hermalin), section V.

sufficient evidence to conclude that calling parties generally receive 75 percent of the benefits of all calls. (Of course, even this would represent quite a heroic conclusion to draw based only on a list of examples.) Suppose also that we were able to determine that a specific bill-and-keep regime under consideration would have calling parties pay for 60 percent of the costs of making calls. It still might be the case that bill-and-keep produced superior results to CPNP since the share of cost borne by callers under bill-and-keep (60 percent) is closer to 75 percent than is the share of benefits borne by callers under CPNP (100 percent). It certainly does not seem obvious that CPNP would be the superior regime.

For similar reasons, bill-and-keep is at least as consistent as CPNP with principles of cost causation. CPNP arbitrarily allocates all cost-recovery to the calling party, even though the called party contributes to many of those costs by accepting the call, and even though its carrier makes cost-consequential decisions about network technology and design. The argument that the calling party should be required to pay for all of the cost of a call because it is the sole "causer" of the call is therefore fallacious. After the first second of a telephone call, the called party is as much a causer of the call as is the calling party, since either can terminate the call if it wishes. Ordover and Willig respond that, to the extent that CPNP incorrectly allocates the cost of calls, parties could make up for this deficiency by agreeing to take turns calling one another or perhaps even exchanging dollar payments. But this obviously isn't always possible and, furthermore, is a clumsy and awkward mechanism at best.

Farrell and Hermalin make a different argument.³⁰ Based on a more general model that generalizes some of the assumptions implicitly made by DeGraba 2000, they show that a more complex analysis may be required to determine the optimal intercarrier compensation rule and

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³⁰Farrell and Hermalin, section V.

that considerations similar to those that enter Ramsey pricing may need to be taken into account. They use their analysis to argue that DeGraba 2000's simple example, where splitting costs evenly between the parties creates perfectly optimal incentives, relies on special assumptions. It is true that their analysis identifies factors that DeGraba 2000 did not consider. However, far from nullifying the main point of DeGraba 2000, their analysis strengthens it. By identifying a range of new complex issues that need to be taken into account, Farrell and Hermalin make it even more difficult to develop any unambiguous sense of whether or not one of the regimes would create better incentives for short run use of the network than the other.

Furthermore, proponents of CPNP have failed to notice the critical fact that the model which they are using to support the claim that CPNP creates better incentives than bill-and-keep actually differs fundamentally from the way that CPNP works in practice, at least for the case of local calls. The model that proponents analyze is really a model of Calling *Party* Pays, not Calling *Party's Network* Pays. That is, the result that is shown is that when callers receive all of the benefit of calls, it would be optimal to charge *callers* a termination price equal to the incremental price of making a call. However, as has been discussed extensively above, for the case of local calls from the end user of an ILEC to the end user of a local carrier, in most jurisdictions callers are charged a completely flat rate by the ILEC regardless of whether the ILEC is asked to pay termination charges to the local carrier. Therefore, in the case of local calls, given current institutional arrangements, no incentives are created for the calling party to consider the incremental cost of a call when the local carrier is allowed to charge terminating rates to the ILEC. This is because the costs are not passed on to the calling party and therefore

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³¹See Section 4.1.3.

simply disappear into a "black hole" where neither the caller nor the receiver pays any attention to them.

5.6 Bill-and-keep will not create incentives for CLECs to inefficiently specialize in originating traffic.

Farrell and Hermalin³² suggest that a bill-and-keep regime might remove a CLEC's incentive to specialize inefficiently in serving end users that primarily receive calls (such as ISPs) only at the cost of giving CLECs new incentives to specialize inefficiently in serving users that primarily originate calls. They acknowledge, however, that bill-and-keep would not create such a reverse problem if ILECs were allowed to charge prices to their own end users that appropriately reflect the costs of providing these end users with service in a bill-and-keep environment. Rather, their argument depends on the assumptions that (i) ILECs levy incremental charges on originators of local calls to cover both the incremental cost of originating and terminating calls; and (ii) they will continue to be required to do this after the adoption of bill-and-keep.³³

These assumptions are both invalid. With respect to assumption (i), ILECs generally do not levy any incremental charges on end users for making or receiving purely local calls. That is, a single flat-rated fee is levied to cover these costs. Bill-and-keep does not produce any

³²Farrell and Hermalin at 6.

³³The argument is as follows: Suppose that the ILEC charged the calling party a perminute fee to cover the incremental costs of both originating and terminating a local call and charged the called party no per-minute fee. Under a CPNP system, the CLEC would have no incentive to try to attract end users that primarily originate calls because it would have to pay termination fees to the ILEC. However, under a bill-and-keep system, it would not have to pay termination fees to the ILEC and therefore, according to the argument, would have an incentive to try to attract end users that primarily originate calls because it would not have to charge for termination as well.

systematic incentive for CLECs to specialize in originating traffic when ILECs use flat-rated charges.

With respect to assumption (ii), Farrell and Hermalin suggest that the fact that ILECs did not have sufficient pricing flexibility to counter CLEC efforts to attract ISPs under the CPNP regime suggests that they will not have sufficient pricing flexibility to counter the efforts of CLECs to attract end users that primarily originate traffic under a bill-and-keep regime. However, this comparison is clearly inapt. In the case of ISP-bound traffic, CLECs were able to make large profits even if they charged ISPs a price of zero. Therefore, in order to compete with CLECs, ILECs would have needed the flexibility to pay ISPs large "bribes" in order to induce them to agree to accept service. In the scenario described by Hermalin and Katz, where the adoption of bill-and-keep gives CLECs the incentive inefficiently to attract end users that only originate calls, all that the ILEC would have to do to counter these efforts would be to charge incremental origination prices no greater than incremental origination costs. That is, the ILEC would need only the flexibility to adjust prices closer to costs. In my opinion, the fact that ILECs did not have the flexibility to offer large "bribes" to selected end users does not shed much light on the question of whether or not they would have the flexibility to adjust prices closer to costs.

Selwyn and Lundquist make an argument that is similar to that of Farrell and Hermalin.³⁴
They argue that current pricing practices are incompatible with bill-and-keep and would have to be changed radically if bill-and-keep were adopted. The same rebuttals apply to this argument as well. Namely, the assumption that ILECs generally charge calling parties a per minute fee to cover the incremental costs of both originating and terminating local calls is simply false.

³⁴Selwyn and Lundquist at 39-43.

Furthermore, even if this assumption were true in some cases, the type of adjustments in prices that would be required under a bill-and-keep regime-simply involve moving prices closer to costs and would not be difficult to implement.

5.7 To the extent that CPNP reduces unwanted phone calls, it will also reduce wanted phone calls.

Ordover and Willig³⁵ observe that (i) some phone calls that people receive, such as solicitations during the dinner hour, are unwanted; (ii) parties pay higher prices for making calls under a CPNP system than under a bill-and-keep system; and (iii) since the end users that originate unwanted calls might be expected to make fewer of these calls if they had to pay more to make them, fewer unwanted calls are made under a CPNP system than would be made under a bill-and-keep system.

However, there is no reason to believe that raising the price of making a telephone call will have a substantially larger effect on unwanted calls than wanted calls. That is, Ordover and Willig's reasoning about the relative effects of CPNP vs. bill-and-keep on the number of phone calls that are made applies equally well to all phone calls. Ordover and Willig are essentially therefore simply making the trivial observation that having a policy that makes phone calls more expensive will result in fewer phone calls being made. In such circumstances, there are fewer "bad" phone calls made, but there also are fewer "good" phone calls made. Ordover and Willig certainly provide no basis for drawing the conclusion that having a policy that makes phone calls more expensive for calling parties is good because the social benefits from the reduction in "bad" phone calls is greater than the social costs from the reduction in "good" phone calls. Taking Ordover and Willig's reasoning to its logical extreme demonstrates the fallacy in their argument.

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³⁵Ordover and Willig at 13-18.

According to Ordover and Willig's reasoning, simply shutting the telephone system down entirely would be an even more desirable policy choice than adopting CPNP because this would entirely eliminate all unwanted phone calls. Of course, this reasoning ignores the "side effect" that all desirable phone calls would also be eliminated.

In any event, if the number of unwanted phone calls were a concern, it would be more appropriate for the Commission to take additional policy actions that specifically reduce unwanted phone calls, rather than policy actions that reduce all phone calls. For example, the Commission already restricts telemarketing calls in certain circumstances and permits called parties to ask to be placed on a "no call" list.³⁶

6. CONCLUSION

If intercarrier compensation charges were determined under a bill-and-keep regime, then carriers would be responsible for recovering their origination and termination charges from their own end users instead of from other carriers. A key advantage of moving to such a system is that it removes the need to regulate termination prices charged by non-dominant carriers and thereby removes all of the possibilities for mistakes, distortions, and arbitrage opportunities that regulation can cause. An appropriately designed bill-and-keep system is therefore superior to a CPNP system. The bill-and-keep system proposed by Qwest improves upon the system proposed by DeGraba 2000 and would therefore be a particularly desirable system for the Commission to consider adopting.

³⁶ See Qwest Reply Comments at 18.

APPENDIX

Curriculum Vitae of William P. Rogerson

Personal

Date of birth:

November 7, 1955

Citizenship:

American

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Education

B.A., Economics, University of Alberta, 1976

Ph.D., California Institute of Technology, 1980

Current Employment

Professor of Economics, Northwestern University

Honors, Awards and Research Grants

Graduated from the University of Alberta with distinction, 1976

Earl C. Anthony Fellowship, 1976-77

Canada Council Doctoral Fellowship, 1979-80

Shelby Cullom Davis Fellowship, 1979

NSF Grant SES-8320451, "Moral Hazard, Reputation, and Product Quality," March 1984 - March 1985

NSF Grant SES-8504304, "Moral Hazard, Reputation, and Product Quality," April 1985 - September 1987

NSF Grant IRI-8705477, "Contracting Under Asymmetric Information," July 1987 - December 1989

Named to Household International Professorship in Economics, September 1987 - August 1989

Lynde & Harry Bradley Foundation Research Grant, "An Economic Analysis of Defense Procurement Regulations," June 1989 - December 1991.

NSF Grant SES-8906751, "Profit Regulation of Defense Contractors," August 1, 1989 - July 31, 1991.

Olin Fellow at The Centre for the Study of the Economy and the State, University of Chicago, October 1, 1989 - June 30, 1990.

Faculty Fellow, Center for Urban Affairs and Policy Research, Northwestern University, September 1991-present.

Smith Richardson Foundation, Inc. Research Grant, "Economic Incentives and the Defense Procurement Process," March 1, 1993 - May 31, 1995.

Elected a Fellow of the Econometric Society, 1999.

Research and Teaching Interests

Incentives and Information in Markets and Organizations, Regulation, Industrial Organization, Cost Accounting, Telecommunications, Defense Procurement, and Health Care.

Employment History

Research Assistant to Canadian Member of Parliament, Arnold Malone, June 1975 - September 1975

Teaching Assistant at University of Alberta, September 1975 - June 1976

Economist, Department of Industry, Trade and Commerce, Government of Alberta, June 1976 September 1976

Research Assistant, Environmental Quality Laboratory, Caltech, June 1977 - September 1977

Economist, Long Range Planning and Structural Analysis Division, Department of Finance, Government of Canada, June 1978 - September 1978

Teaching Assistant to Professor Charles R. Plott, Division of Humanities and Social Sciences, Caltech, September 1979 - June 1980

Assistant Professor of Economics, Stanford University, September 1980 - August 1984

Associate Professor of Economics, Northwestern University, September 1984 - May 1990

Professor of Economics, Northwestern University, May 1990 - Present

Chair, Economics Department, Northwestern University, September 1996 - August 1998.

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Chief Economist, Federal Communications Commission, June 1, 1998-May 31, 1999 (on leave from Northwestern for this year.)

Director, Northwestern Program in Mathematical Methods in the Social Sciences, September 2000- present.

Co-Director, Center for the Study of Industrial Organization, Northwestern University, September 2000-present.

Professional Activities

Editor of Defense and Peace Economics, January 1995 - December 1998.

Member of the editorial board of <u>Defense and Peace Economics</u>, September 1991 - December 1998.

Member of the editorial board of Review of Accounting Studies, September 1993 to present.

Member of the editorial board of Journal of Industrial Economics, October 1995- Sept. 1998.

Chief Economist of Federal Communications Commission, June 1, 1998 - May 31, 1999.

Member of the Illinois Economic Policy Council, September 1999 to present.

Consultant to: Federal Communications Commission, Federal Trade Commission, Institute for

Defense Analysis, Logistics Management Institute, Office of the Secretary of Defense (Program Analysis and Evaluation), RAND Corporation, US Department of Justice

Refereed Publications

"Aggregate Expected Consumer Surplus As a Welfare With an Application to Price Stabilization," <u>Econometrica</u>, 49, No. 2, (March 1980), pp. 423-436.

"Agriculture in Development: A Game-Theoretic Analysis," with Robert Bates, <u>Public Choice</u>, 35, (1980), pp. 513-527.

"The Social Costs of Monopoly and Regulation: A Game-Theoretic Analysis," <u>Bell Journal of Economics</u>, 13, No. 2, (Autumn 1982), pp. 391-401.

"Reputation and Product Quality," Bell Journal of Economics, 14, No. 2, (Fall 1983), 508-515.

"Consumer Misperceptions, Market Power and Product Safety," with Mitchel Polinsky, <u>Bell Journal of Economics</u>, 14, No. 2, (Fall 1983), 581-589.

"A Note on the Incentive for a Monopolist to Increase Fixed Costs as a Barrier to Entry," <u>Quarterly Journal of Economics</u>, 396, May 1984, 399-402.

- "Efficient Reliance and Damage Measures for Breach of Contract," <u>Rand Journal of Economics</u>, Spring 1984, 39-53.
- "Repeated Moral Hazard," Econometrica, 53, January 1985, 69-76.
- "The First-Order Approach to Principal Agent Problems," <u>Econometrica</u>, 53, November 1985, 1357-1368.
- "Robust Trading Mechanisms" with Kathleen Hagerty, <u>Journal of Economic Theory</u>, 42, June 1987, 94-107.
- "The Dissipation of Profits by Brand Name Capital and Entry When Price Guarantees Quality," <u>Journal of Political Economy</u>, 95, August 1987, 797-809.
- "A Note on the Existence of Single Price Equilibrium Price Distributions," <u>Review of Economic Studies</u>, 54, April 1987, 339-342.
- "Price Advertising and the Deterioration of Product Quality," <u>Review of Economic Studies</u>, 55, April 1988, 215-230.
- "Profit Regulation of Defense Contractors and Prizes for Innovation," <u>Journal of Political Economy</u>, 97, December 1989, 1284-1305.
- "Quality vs. Quantity In Military Procurement," <u>American Economic Review</u>, 80, March 1990, 83-92.
- "Excess Capacity in Weapons Production: An Empirical Analysis," <u>Defence Economics</u>, 2, 1991, 235-250.
- "Optimal Depreciation Schedules for Regulated Utilities," <u>Journal of Regulatory Economics</u>, 4, 1992, 5-33.
- "Contractual Solutions to the Hold-Up Problem," <u>Review of Economic Studies</u>, 59, October 1991, 777-794.
- "Incentives, the Budgetary Process, and Inefficiently Low Production Rates in Defense Procurement," <u>Defence Economics</u>, 3, 1991, 1-18.
- "Overhead Allocation and Incentives for Cost Minimization in Defense Procurement," <u>The Accounting Review</u>, 67, 1992, 671-690.
- "Choice of Treatment Intensities by a Nonprofit Hospital Under Prospective Pricing," <u>Journal of Economics and Management Strategy</u>, 3(1), Spring 1994, 7-52..
- "Economic Incentives and the Defense Procurement Process," <u>Journal of Economic Perspectives</u>, 8(4), Fall 1994, 65-90.
- "Inter-Temporal Cost Allocation and Managerial Investment Incentives," <u>Journal of Political Economy</u>, 105(4), 1997, 770-795.

"The Regulation of Broadband Telecommunications, The Principle of Regulating Narrowly

Defined Input Bottlenecks, and Incentives for Investment and Innovation," <u>University of Chicago Legal Forum</u>, 2000, 119-147.

Other Publications

"Electric Generation Plants" Appendix F.1 in Implementing Tradable Emissions

<u>Permits for Sulfur Oxides Emissions in the South Coast Air Basin</u>, Vol. II, by Glen R. Cass, Robert W. Hahn, Roger G. Noll, ARB Contract No. A8-141-31, June 30, 1982.

"A Comment on Political Institutions and Fiscal Policy: Evidence from the U.S. Historical

Record," <u>Journal of Law Economics and Organization</u>, 6, Special Issue, Conference on "The Organization of Political Institutions", 1991, 155-166.

"Inefficiently Low Production Rates in Defense Procurement: An Economic Analysis," Leitzel, Jim and Jean Tirole, eds., <u>Incentives in Defense Procurement</u>. Boulder: Westview Press, 1993.

<u>Profit Regulation of Defense Contractors and Prizes for Innovation</u>, RAND, R-3635-PA&E, 1991.

An Economic Framework for Analyzing DoD Profit Policy, RAND, R-3860-PA&E, 1991.

Overhead Allocation and Incentives for Cost Minimization in Defense Procurement, RAND, R-4013-PA&E, 1992.

"Review of 'A Theory of Incentives in Procurement and Regulation,'" book review, <u>Journal of Political Economy</u>, 102, 1994, 397-402

On the Use of Transfer Prices in DoD: The Case of Repair and Maintenance of Depot Level Reparables by the Air Force, Logistics Management Institute Paper PA303RD2, January 1995, Logistics Management Institute, McLean, VA.

"Incentive Models of the Defense Procurement Process," in Hartley, Kieth, and Todd Sandler, eds., <u>The Handbook of Defense Economics</u>, North Holland, 1995, 309-346...

"The Economics of University Indirect Cost Reimbursement in Federal Research Grants," (with Roger Noll) in Roger Noll, ed., <u>Challenges to the Research University</u>. Washington: Brookings Institution, 1997.

"New Economic Perspectives on Telecommunications Regulation," (review of <u>Competition in Telecommunications</u>, by Jean-Jacques Laffont and Jean Tirole), <u>University of Chicago Law Review</u>, 67, Fall 2000, 1489-1505.

Recent Papers

"Renegotiation of Fixed Price Contracts on the F-16 Program," (with Tom Frazier), mimeo.

"The Use of Simple Menus of Contracts in Cost-Based Procurement and Regulation," mimeo.

BEFORE THE NEBRASKA PUBLIC SERVICE COMMISSION

IN THE MATTER OF THE COMMISSION,)	
ON ITS OWN MOTION, SEEKING TO)	APPLICATION No. NUSF-17
DETERMINE ACCESS COSTS FOR)	
US WEST (n/k/a QWEST CORPORATION))	

DIRECT TESTIMONY

JEFFREY H. ROHLFS

ON BEHALF OF QWEST CORPORATION

JUNE 7, 2002

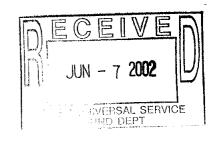


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I. IDENTIFICATION OF WITNESS

- 2 Q1. PLEASE STATE YOUR NAME, EMPLOYER AND POSITION.
- My name is Jeffrey H. Rohlfs. I am a principal and co-founder of Strategic Policy
 Research, Inc. ("SPR"), a policy and economic consulting firm located at 7979
 Old Georgetown Road, Suite 700, Bethesda, Maryland, 20814.

7 Q2. PLEASE DESCRIBE YOUR QUALIFICATIONS.

A2. I am an economist specializing in the telecommunications and mass media industries. I received an AB in economics from Amherst College and a PhD from MIT. I have taught business economics at the Stanford Business School. I spent most of my early career at Bell Labs, rising to Department Head of Economic Modeling Research. While at Bell Labs, I wrote a seminal paper on the theory of network externalities. This theory has been widely cited and applied to universal-service policy and technical standards. I also wrote a seminal empirical analysis on optimal telecommunications pricing and rate rebalancing. I recently completed a book, Bandwagon Effects in High-Technology Industries, which was published by MIT Press in 2001.

I have been a consultant since 1983 and have consulted on telecommunications and public policy for a variety of clients with regard to ground rules for interconnection pricing, telecommunications competition, cost estimation, regulatory reform, restructuring and privatization in many countries, and policies

regarding spectrum and mobile telecommunications. I have substantial inter-1 national consulting experience, including Australia, Bolivia, Canada, Cape Verde, 2 Dominican Republic, Ecuador, European Union, Germany, Honduras, Hungary, 3 Jamaica, Japan, Latvia, Mexico, New Zealand, Panama, Paraguay, Peru, Puerto 4 Rico, Thailand, Venezuela and the United Kingdom. 5 I have conducted and directed numerous studies on the estimation of costs in the 6 telecommunications industry and the recovery of those costs through pricing. 7 This work has encompassed many variants of both incremental costs and fully 8 distributed costs. It has encompassed both bottom-up and top-down methods of 9 cost estimation. 10 I have made dozens of filings before the Federal Communications Commission. 11 In addition, I testified before state commissions in the District of Columbia, 12 Florida, New Jersey, and Ohio. I served as an expert witness in the United 13 Kingdom and in New Zealand. I have filed expert testimony before the U.S. Tax 14 Court. Additionally, before U.S. District Court, I filed expert testimony that was 15 subsequently cited in favorable decisions by the U.S. Court of Appeals and the 16 U.S. Supreme Court. 17 I have worked on the issue of access reform even before the AT&T divestiture, 18 when the issue was "separations reform." Since then, I have authored numerous 19 publications on intercarrier compensation. I testified before an arbitration panel 20

of the Michigan PSC on behalf of Ameritech regarding intercarrier compensation, and have worked on intercarrier compensation issues in Japan and in Peru (where I examined compensation structures between national long-distance, international long-distance, cellular and rural operators). I am currently consulting with regard to intercarrier compensation for regulatory agencies in the United Kingdom, Jamaica, and the Dominican Republic. My Curriculum Vitae is attached as Exhibit 1 to this testimony.

9 Q3. IS THIS YOUR FIRST APPEARANCE BEFORE THE NEBRASKA 10 PUBLIC SERVICE COMMISSION ("NEBRASKA PSC")?

A3. Yes, it is.

II. PURPOSE OF TESTIMONY

Q4. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A4. My testimony, on behalf of Qwest Corporation ("Qwest"), is to provide economic analysis to support its Revised Transition Plan ("Revised Plan") filed in conjunction with this testimony today. The Revised Plan amends the Transition Plan filed by Qwest on April 30, 2002. In the Revised Plan, Qwest proposes to restructure its rates by introducing an intrastate subscriber line charge ("ISLC") in Nebraska. In addition, Qwest proposes moving the existing \$20.4M in support recovered from the NUSF to the ISLC. I will provide economic support for

Owest's proposed intrastate switched access rates and ISLC, which, combined, will yield a revenue-neutral restructuring of Qwest's current intrastate switched access rates. I will discuss the need for such rate restructuring, including the need to eliminate arbitrage opportunities caused by price disparities. Further, I will discuss the role of the NUSF, why exclusive reliance on the NUSF is harmful, and that restructuring rates to efficient levels is a superior resolution. III. OVERVIEW OF INTERCARRIER COMPENSATION, OF WHICH ACCESS IS ONE COMPONENT PLEASE DESCRIBE THE CURRENT SITUATION WITH REGARD TO Q5. INTERCARRIER COMPENSATION, WHICH INCLUDES INTRASTATE ACCESS. Currently, the services of local interconnection, interstate switched access, and A5. intrastate switched access sell for very different prices. Nevertheless, to supply any of these three services, a local exchange carrier ("LEC") provides the same functionality; viz., it carries calls between its own customers and other carriers. From the perspective of the incumbent LEC ("ILEC"), all that differs are the prices of the services and the entities that are qualified to purchase it. This regulatory rate structure contains numerous price disparities that are not cost-The prices that other carriers pay (or the in the case of local calls

originated by Owest, the other carriers receive) do not differ because of cost,

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which is the same for all three services. Rather, the differences derive from the fact that the various prices evolved at different times in different jurisdictions and were designed to further different public-policy objectives.

In particular, high access charges are vestiges of the pricing of the pre-divestiture Bell System. In the pre-divestiture period, toll rates far exceeded costs. The contributions from toll services (revenues less incremental costs) were used to recover fixed and common costs of the network. After divestiture, high access charges allowed this rate structure to persist. Initially, the FCC and every single state regulator opted for maintaining high access charges, rather than restructuring rates. However, both federal and state access charges have declined considerably since that time. Nevertheless, intrastate access charges remain high in the Qwest states, where they still typically exceed any reasonable measure of costs.

Q6. HOW DO QWEST'S PRICES FOR VARIOUS TYPES OF INTERCARRIER COMPENSATION IN NEBRASKA COMPARE?

A6. Table 1 below contains Qwest Nebraska's intercarrier compensation rates for switched interstate access, switched intrastate access, and local interconnection at the tandem and at the end office. Each rate is expressed in dollars per minute of use.

Table 1

Current	ntercarrier Compen	sation Rates for Qwes	st Nebraska
Interstate Switched Access	Intrastate Switched Access	Local Termination at Qwest's Tandem	Local Termination at Qwest's End Office
\$0.0055	\$ 0.0256	\$0.0045	\$0.00203

Interstate and intrastate switched access rates are the sum of all switched revenues in the switched access category of services. Local termination at Qwest's tandem is calculated as one minute of tandem switching, plus one-minute of transport over 10 miles, plus one minute of local switching at the end office.

The glaring disparity is that Qwest's intrastate switched access price is over four times the price for interstate switched access. The price for local termination at Qwest's tandem is slightly lower than for interstate switched access service. The occurrence of transport and tandem switching explains the price difference between local termination at the tandem and at the end office. Further, when a Qwest customer originates a local call to a customer served by a CLEC, Qwest pays the other carrier for call termination. Intrastate switched access rates are clearly out of sync with the other sets of intercarrier compensation rates that Qwest charges for traffic originating and/or terminating in its Nebraska service area.

Nonetheless, Nebraska has made considerable progress by eliminating implicit subsidies, such as the intrastate carrier common line charge ("CCLC"). The PSC is to be commended for moving toward efficient rate structures. There is more work, however, to do since, thus far, the NUSF has been exclusively relied upon

1		to compensate for the lost subsidies. I shall discuss later the necessary actions to
2		achieve fully efficient rate structures.
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4	Q 7.	DOES THE CURRENT COLLECTION OF DISPARATE
5		INTERCARRIER COMPENSATION RATES SERVE THE PUBLIC
6		INTEREST? WHY OR WHY NOT?
7	A7.	I contend that the current collection of disparate intercarrier compensation rates,
8		considered as a whole, does not serve the public interest. My reasons are as
9		follows:
10		■ The current rate structure offers myriad opportunities for arbitrage,
11		which diminishes the productivity of the local telecommunications
12		sector. In the long run, the inevitable result of productivity loss is
13		higher ILEC rates. Eventually, arbitrage will cause the regulatory
14		rate structure to collapse (unless regulators redress the problem
15		first);
16		■ The current rate structure undermines the growth of efficient local
17		telecommunications competition; and
18		■ It is completely unsuitable for the future, in which packet
19		technology will play an ever-increasing role.
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Q8. WHAT ARBITRAGE OPPORTUNITIES ARISE UNDER THE CURRENT DISPARATE INTERCARRIER COMPENSATION RATES?

- 3 A8. Arbitrage opportunities arise in at least four major areas:
- Focusing on customers that have disproportionately large amounts of toll traffic;
- 6 Disguising of calls;

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- 7 Growth of wireless telecommunications; and
- 8 Voice over Internet Protocols ("VoIPs").
 - The most important type of arbitrage is simply for CLECs to specialize in serving customers that have disproportionately large amounts of toll traffic. From the ILEC's perspective, those customers are expected to provide sizable contributions (revenues less incremental costs) to help sustain the current rate structure. They can, however, evade paying their share of these contributions to recovering the fixed and common costs of the network by using CLECs for their local service.
 - A CLEC can profitably serve these customers, even if its costs are significantly higher than those of the ILEC. Thus, the effect of the current rate structure is to invite competition that raises costs and lowers productivity of the total local telecommunications sector, encompassing both ILEC and CLECs.
- The increase in ILEC rates that is likely to result is, in effect, a subsidy from remaining ILEC customers to the CLEC and its customers. That is, the remaining ILEC customers are worse off because the CLEC captured the customer in

question. The current rate structure makes the ILEC's remaining customers, in effect, involuntary parties to the transaction between the CLEC and its customer. If the CLEC has higher costs than the ILEC, the losses to ILEC customers exceed the gains to the CLEC and its customers. The difference is the aggregate loss of productivity to the local telecommunications sector. Of course, it is possible that the CLEC is more efficient than the ILEC. The CLEC may have a state-of-the-art fiber-optic network. It may also be able to enjoy economies of scope by supplying local telephone service, together with long-distance service and/or broadband Internet access. Even in this case, however, the current rate structure still leads to a subsidy from ILEC ratepayers to the CLEC and its ratepayers. Furthermore, if the CLEC is efficient, the subsidy is completely unnecessary. The CLEC would have the incentive to enter on the basis of its superior efficiency, even in the absence of a subsidy. This type of arbitrage can be expected to grow rapidly over the next several years. A great deal of capacity has already been deployed and is available to provide service to business customers who have disproportionately large toll usage. For example, among the companies that offer facilities-based services in Nebraska is Cox Communications. Through its Cox Business Services, Cox Communications supplies local and long distance telephone, high-speed Internet access, data transport, and video solutions over a "state-of-the-art fiber-optic-based broadband

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network," in Omaha.¹ Cox has deployed telecommunications networks in 20 states, including Nebraska and Arizona. Another facilities-based competitor in Nebraska is Covad Communications. Covad has recently emerged from Chapter 11 Bankruptcy and continues to provide business services in the areas of Nebraska served by ALLTEL and Qwest² and 94 of the top Metropolitan Statistical Areas ("MSAs") across the United States.³ Though a number of CLECs did not fare well in the recent recession, their facilities remain in place, and other carriers have acquired some of their assets or they have emerged from bankruptcy without the load of debt they had been carrying. The fiber deployed by these CLECs and others will support substantial growth without the need for much additional infrastructure investment.

Q9. PLEASE ELABORATE ON THE OTHER FORMS OF ARBITRAGE.

A9. The existing rate structure also invites other forms of arbitrage, as discussed above. In particular, the ILEC often cannot determine whether a call is local, intrastate or interstate; e.g., if the customer uses a dedicated link to an IXC for both local and long-distance calls. Thus, customers and other carriers have the

Downloaded from www.coxbusiness.com/systems/ne omaha (obtained June 5, 2002)

² Nebraska Public Service Commission, Annual Report to the Legislature on the Status of the Nebraska Telecommunications Industry (September 28, 2001) at 15.

³ Downloaded from http://www.covad.com/companyinfo/history.shtml (obtained June 5, 2002).

incentive and ability to disguise toll calls as local calls. By doing so, the other 1 carrier can benefit from the favorable terms of local interconnection—including 2 being paid for terminating calls. It can evade paying carrier access. The cost 3 savings (incentives for evasion) are especially great for intrastate access charges in the Owest states. 5 It is hard to tell how much disguising of calls actually occurs, because the 6 perpetrators try to conceal it. In any event, it is obvious that CLECs have the 7 ability and incentive to disguise some calls. It would therefore be folly to assume 8 in the absence of empirical evidence that the practice is small or insignificant. I believe that if restructuring is going to take a long time to complete, regulators should periodically audit CLECs. If they find that a CLEC has reduced its access payments by disguising calls, sufficiently large fines should be levied to make the 12 practice unprofitable. That is, the amount of the fine times the probability of 13 getting caught should exceed the savings from disguising calls. If a CLEC is 14 found to have a sustained and systematic practice of disguising calls, its certificate 15 should be revoked. The current rate structure is difficult enough to sustain 16 without its additionally depending on an unenforced "honor system." 17 Of course, this high degree of regulatory intervention is far from ideal. A much 18 better solution is to fix the problem by rationalizing the rate structure. With a 19 rational rate structure, payments of CLECs and IXCs would depend on the 20

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honor system in the different jurisdictions.

The current rate structure also affords artificial incentives for customers to use mobile (or other wireless) services to make toll calls. Mobile carriers obtain connection to the ILEC network through local interconnection rates agreed to under the terms of Section 251. This pricing scheme enables mobile carriers to originate and terminate long-distance calls to/from ILEC customers within a broad

activities that the ILEC performs on their behalf—not on what they report on the

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including being paid for terminating calls. The same long-distance calls over a

wireline network would, however, be subject to carrier access charges.

service area (that may span many ILEC local calling areas) on favorable terms—

This arbitrage will continue to grow as the wireless industry grows, and the wireless industry is growing very rapidly. According to CTIA, usage on cellular phones is increasing 75 percent every year.⁴ Further, the Yankee Group has estimated that by 2006, there will be close to 100 million wireless data users.⁵

That is, the number of wireless users will be approximately 44 percent of the

⁴ Yuki Noguchi, "More Cell-Phone Users Cut Ties to Traditional Service," *The Washington Post* (December 28, 2001) from www.washtech.com.

⁵ "Wireless Pricing Bytes, According to the Yankee Group," Yankee Group Press Release (October 24, 2001). Further, they have estimated that about 26 percent of all wireless users (17 percent of the total U.S. population) will use wireless devices to purchase premium content and authorize the purchase of goods. ["The Yankee Group Publishes U.S. Mobile Commerce Forecast," Yankee Group Press Release (October 31, 2001).]

number of wireline access lines.⁶ Some of these wireless telephones will actually displace wireline access lines.

Finally, many customers of all sizes, from large corporations to the single-line residential customer, are starting to use their computers and Internet connections to make voice calls using VoIP. The quality of service of VoIP for calls carried over the Internet is generally significantly lower than those carried on traditional circuit-switched networks. It is, however, possible for carriers that specialize in VoIP to use their own facilities for long-haul transmission and offer quality equal to traditional circuit-switched voice telecommunications. As VoIP grows—and that growth is inevitable—the current pricing regime will become increasingly difficult to sustain. VoIP traffic appears to be local traffic, as the user calls his local ISP. The caller, however, could be conversing with a person in another town or even in another state or country. Thus, a long-distance call is disguised as a local call for billing purposes.

This threat is more than mere potential. Today, about 5 percent of Internet users worldwide are using their computers to make voice phone calls. Ovum estimates that that will increase to 23 percent by 2006.⁷ About \$3 billion of U.S. telephone

⁶ SPR estimates that there will be approximately 229 million access lines in the U.S. in 2006, using a conservative annual growth rate of 3 percent applied to the 1999 access line count of 186 million reported in the FCC's *Trends in Telecommunications*, at Table 8.1 (August 1, 2001).

⁷ Ovum estimate, 2000. From www.cisco.com, "Facts and Stats" page (downloaded January 29, 2002). Cisco estimates that worldwide VOIP was under \$1 billion in 1999 and will increase to about \$8 billion by 2004. Similarly, other IP communications, voice-enabled e-commerce and enhanced services, are expected (continued)

company revenues with shift over to VoIP by the end of 2004, according to Forrester Research, Inc.⁸ The adoption rate of VoIP in large U.S. businesses increased from 5 percent to 19 percent over a six-month period in 2001. Similarly for small and medium organizations, the adoption rate increased from 7 to 13 percent over the same six-month period in 2001.⁹

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Q10. WHAT EVENTUALLY WOULD YOU PREDICT TO BE THE RESULT OF THIS ARBITRAGE?

The effect of all the types of arbitrage described above is that the disparate rate A10. 9 structure will ultimately collapse. Sophisticated consumers and their 10 interexchange carriers are finding more and more ways to use new technology to 11 evade paying access charges, which support the current rate structure. All the 12 types of arbitrage that I described are growing rapidly. As fewer and fewer 13 ratepayers pay for access charges, the rates paid by each remaining user for ILEC 14 services must increase if the ILEC is to cover its total cost and have the ability and 15 incentive to make infrastructure investments. Eventually, the users who were 16

to generate collectively about \$10 billion dollars worldwide. [Mike Volpi, Chief Strategy Officer, Cisco, Systems, "Voice-over-IP: A Tornado Market" (March 27, 2001).]

⁸ Forrester Research, 2000, from www.cisco.com (downloaded January 29, 2002).

⁹ "The Future of VOIP," posted on www.voipwatch.com (October 25, 2001).

1		supposed to pay low rates will pay more than they would have in the absence of	
2		the failed rate structure.	
3		The dynamic described in the above paragraph seems inevitable. The economic	
4		harms from not rationalizing intrastate prices will grow rapidly over time.	
5		Eventually, regulators will have no reasonable alternative to rationalizing the rate	
6		structure.	
7		The dislocations that will be caused by the inevitable collapse of the rate structure	
8		will grow over time. Until the problem is fixed, CLECs will respond to incentives	
9		and become more and more entrenched in arbitrage operations. When rates are	
10		ultimately restructured, much of the investment that CLECs made to utilize	
11		arbitrage may become unproductive. Some CLECs may even fail. These	
12		problems can be minimized by beginning the restructuring process now. It is	
13		important for regulators to send a credible market signal that a rationalized rate	
14		structure is on the way. To be credible, the signal should consist of a specific	
15		long-term plan plus some significant immediate progress.	
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17	Q11.	WHAT ARE THE CONSEQUENCES OF THE CURRENT RATE	
18		STRUCTURE FOR THE GROWTH OF EFFICIENT FACILITIES-BASED	
19		LOCAL TELECOMMUNICATIONS COMPETITION?	
20	A11.	The current rate structure undermines the growth of efficient facilities-based local	
21		telecommunications competition. Large business customers are attractive	

customers for CLECs under the current rate structure. They can often be 1 efficiently served with fiber-optic technology, because they are in dense business 2 areas, or sometimes because a single end-user location is enormous, in itself. In 3 addition, large business users are likely to have a disproportionately large amount 4 of toll traffic and support the arbitrage, described above. 5 Many large business customers would be attractive customers, even if rates were 6 They could still often be efficiently served with fiber-optic restructured. 7 technology. The amount of toll traffic would, however, be much less relevant. Thus, CLECs could also profitably focus their marketing efforts on firms (e.g., 9 real-estate firms) whose community of interest is largely local. 10 More importantly, restructuring rates would make it much easier for CLECs to 11 compete for residential customers. For example, wireline CLECs could use some 12 combination of fiber optics, coaxial cable, and copper wire to offer a combination 13 of telephone service, broadband Internet access, and cable television. 14 competition would be very constructive. Not only would it provide competition 15 for telephone and broadband Internet service, but it would also undermine the 16 monopoly position of cable television companies, to the benefit of their 17 customers. The only problem with this form of competition is that it is not 18 occurring on any significant scale. 19 In Silver Blaze, Sherlock Holmes identified the killer on the basis of the dog that 20 did not bark. In this case, we can identify the regulatory market distortion from 21

the killer application that did not appear in the market. The economics of offering residential telephone service to compete with the ILEC are simply not very attractive under the current rate structure.

012. HOW CAN THESE PROBLEMS BE AVOIDED OR MITIGATED?

A12. Regulated ILEC rates must be rationalized if these problems are to be avoided and the full benefits of local telecommunications competition are to be realized. As Table 1 above, illustrates, first and foremost, switched access charges must be lowered. Such reductions would, taken by themselves, weaken the ability and incentive of ILECs to make infrastructure investments (especially those required to deploy the packet-switched technology that is demanded by today's growing data and Internet applications). If this undesirable outcome is to be averted, regulators must afford ILECs the opportunity to earn compensatory revenues from other services, *e.g.*, through revenue-neutral rate restructuring. As switched access rates are lowered, offsetting revenues could come from the creation of an ISLC. I will discuss these issues further with regard to the Amended Transition Plan filed in this proceeding.

Q13. WHAT LESSONS FOR EFFICIENT PRICING CAN BE LEARNED FROM THE HISTORY OF THE TELECOMMUNICATIONS INDUSTRY OR OTHER INDUSTRIES?

The key lesson, which has been borne out in the history of telecommunications as A13. well as in other industries, is that socially engineered pricing regimes are unsustainable and counterproductive upon opening the industry to competition. When regulators decide to allow and promote competition in a regulated industry. they should move toward a market-based pricing structure as quickly as practicable. In such a structure, prices in competitive markets only slightly exceed incremental costs; additionally, the regulated firm is afforded the opportunity to recover its total costs. Experience has shown that the costs of not pricing in this manner can be enormous. The history of the transportation industry offers a splendid example of how large those costs can be. 10 During the early period of monopoly, the railroads had a rate structure with higher rates for transport of more valuable (primarily manufactured) goods and lower rates for lower-value (primarily agricultural) goods. This "value of service" approach worked satisfactorily during the monopoly period but became unsustainable in the face of competition by common-carrier trucking. Because of competition, continuing to charge high prices for transport of manufactured goods was counterproductive. It simply resulted in losing the business to trucking competition.

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¹⁰ A critique of the regulation of the railroad is contained in John R. Meyer, Merton J. Peck, John Stenason and Charles Zwick, *The Economics of Competition in the Transportation Industries* (Cambridge: Harvard University Press, 1959).

The pricing policy that was called for is as follows: 1 Lower prices for transport of high-value goods so as to be competi-2 tive with trucks but still cover incremental costs; and 3 Raise prices for transport of low-value goods sufficiently to afford 4 the railroad the opportunity to recover its total costs, including the 5 fixed costs of the roadbed. 6 Had the Interstate Commerce Commission ("ICC"), which regulated railroad 7 rates, followed this pricing policy, most railroads would probably have remained 8 viable. 9 In reality, the ICC continued its obsolete policy of value-of-service pricing until 10 Congress legalized market-based pricing in 1980 with the Staggers Act. In the 11 meantime, the revenue base of the railroads continually eroded, as they lost more 12 and more business to competition. As a result, the railroads suffered varying 13 14 degrees of financial distress, and many went bankrupt before the Staggers Act was 15 passed. Lastly, as a result of mis-regulation, the U.S. railroad industry devolved. over a period of several decades, from one of the premier industries of America to 16 an international disgrace. 17 The history of the airline industry offers similar lessons. The Civil Aeronautics 18 Board ("CAB"), established in 1938, had regulatory authority over interstate 19

airline services. Its policy was to keep fares in high-density long-haul markets

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above cost and fares in low-density short-haul markets below costs. 11 Airlines 1 2 could not charge less in dense markets. They could, however, add services and flights (decreasing the percentage of seats filled), both of which drove up costs 3 and led to continual price increases. 4 The poor performance of the airline industry under regulation eventually led to the 5 Airline Deregulation Act in 1978, which abolished the CAB effective year-end 6 1984. As a result of deregulation, travelers (especially tourists) have benefited 7 8 from lower prices on major routes. At the same time, efficient competition, using 9 small planes, has been attracted to less-dense markets. This history of telecommunications with regard to this issue is still unfolding. At 10 the time when the AT&T divestiture was announced, the telecommunications rate 11 structure had been socially engineered to an extreme degree. It did not even 12 remotely resemble a market-based pricing structure. 13 At this point the history of telecommunications diverged sharply from that of 14 15 railroad or airlines. The FCC, unlike the pre-deregulation ICC and CAB, recognized the problem and took preventive measures. These included reform of 16 17 the Division of Revenues (or Separations) process and the imposition of SLCs.

¹¹ Regulatory Reform: What Actually Happened, L. Weiss and M. Klass, eds. (Little, Brown & Company: 1986) at 43.

As a result of these policies, telecommunications prices moved much closer to 1 market-based levels. 2 3 Even now, however, eighteen years after the AT&T divestiture, telecommunications prices still deviate substantially from market-based rates. At the 4 same time, the CLEC industry is poised for rapid growth. It will assuredly exploit 5 whatever arbitrage opportunities are offered by the existing rate structure. It 6 remains to be seen whether telecommunications regulators will rise to the 7 challenge and take the further steps necessary to achieve a market-based rate 8 9 structure. If they do not, I would expect telecommunications to experience serious 10 setbacks, similar to those of the pre-deregulation railroad and airline industries. 11 IV. RESTRUCTURING SWITCHED ACCESS RATES IN NEBRASKA 12 Q14. EARLIER YOU STATED THAT NEBRASKA HAS MADE PROGRESS IN 13 REDUCING SUBSIDIES. WHAT STEPS HAS THE NEBRASKA PSC 14 TAKEN IN THIS REGARD? 15 A14. Since 1999, Nebraska has been working on a transition plan in which switched 16 17 access rates have been progressively reduced and the CCLC has been eliminated. Such rate elements have historically provided large contributions, relative to those 18 of local services, toward the recovery of the fixed and common costs of the 19 network. 20

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2 Q15. IF NEBRASKA HAS ELIMINATED IMPLICIT SUBSIDIES, WHY ARE

FURTHER ACTIONS NECESSARY?

Though implicit subsidies have been eliminated, two problems remain: excessive reliance on the NUSF and continued opportunities for arbitrage under current disparities of interstate and intrastate switched access rates. Although implicit subsidies have since been replaced by explicit contribution from the NUSF, costs are still not borne by the cost causer. For this reason, ISLCs are more efficient than total reliance on the NUSF. Further, the current high levels of intrastate switched access rates continue to encourage unproductive arbitrage.

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Q16. WHAT ARE THE BENEFITS OF QWEST'S PROPOSAL TO RESTRUCTURE RATES BY INTRODUCING AN ISLC IN NEBRASKA?

14 A16. The benefits of Qwest's proposal to restructure rates by introducing an ISLC to balance the switched access reduction are many. First, reducing switched access 15 rates to the interstate level eliminates a significant opportunity for arbitrage by 16 long-distance carriers by disguising intrastate traffic as interstate. As I showed 17 above, Qwest's intrastate switched access rates are more than four times the 18 interstate level. Second, economic efficiency is maximized by restructuring rates 19 20 to their efficient levels and having the cost causer pay for the costs that he or she causes. Exclusive reliance on the NUSF neither meets this objective of efficiency 21

nor accords with the principles of cost causation. In contrast, flat per-line charges 1 2 are an economically efficient mechanism for recovering costs that are not traffic 3 sensitive. The total reliance on NUSF funds to replace eliminated subsidies is an inadequate 4 solution in the long run. Further progress should be made in recovering non-5 traffic sensitive costs from flat-rate charges. Qwest's proposed ISLC for 6 Nebraska will lead to further gains in promoting efficient competition and 7 avoiding inviting unproductive arbitrage. Initially, Qwest proposes only to offset 8 the pending reduction in intrastate access through the ISLC. Yet, as soon as is 9 practicable, an ISLC or some flat-rate charge should be implemented to replace 10 current reliance on the NUSF. This is the most efficient resolution to inefficient 11 12 rate structures. 13 14 Q17. YOU STATED IN YOUR PREVIOUS RESPONSE THAT RELIANCE ON THE ISLC OR SOME FLAT-RATE CHARGE IS MOST EFFICIENT. 15 WHAT ARE THE CONSEQUENCES OF CONTINUING TO RELY 16 EXCLUSIVELY ON THE NUSF 17 FOR THE **PENDING** REDUCTIONS AS WELL AS FOR THE ENTIRETY OF IMPLICIT 18 19 SUBSIDIES? 20 As I discussed earlier, continued reliance on the NUSF places a burden on carriers, and, thus, customers, who are not responsible for causing the costs. In 21

this proceeding, Qwest is proposing to introduce an ISLC of \$1.25 that its own customers will be paying. Other carriers and their customers in Nebraska will not be responsible for this fee. Further, if Qwest is permitted to recover all of the previously removed implicit subsidies (about \$20.4 million), that amount plus the amount pending would result in a relatively modest ISLC of approximately \$5.00 per line per month. The full reliance on an ISLC should occur sooner rather than later. The result will be greater economic efficiency in telecommunications markets.

Q18. IF ISLCs REPLACE NUSF FUNDING, WHAT WILL BE THE ROLE OF THE NUSF?

12 A18. The NUSF will continue to provide support to enable the deployment and
13 maintenance of local telephone networks in areas deemed to be high cost; that is,
14 in geographic areas where the cost to develop and maintain local telephone
15 networks is so prohibitive that service would not be affordable without subsidies.
16 The availability of funds from sources such as the NUSF, the federal USF or
17 Rural Utilities Service (formerly, Rural Electrification Administration), makes
18 service affordable in these areas.

Q19. HOW DO ISLC CHARGES REFLECT CHANGES IN SWITCHING TECHNOLOGY AND COSTS?

ISLC charges reflect changes in switching technology and costs very well. The 1 A19. nature of switching costs has changed significantly over time with advances in 2 digital technology. Switching costs today are more line-driven than traffic-3 sensitive. It is not unreasonable to model switching costs now as depending 4 entirely on the number of line-side ports and the number of trunk-side ports. 5 Switching costs in such a model can be reasonably recovered entirely as fixed 6 monthly charges. (From the perspective of a carrier or large end user, however, 7 the costs may be traffic-sensitive, because additional traffic may require the use of 8 more trunks or lines, respectively.) The proposed changes in Owest's switched 9 access rates and the introduction of, and eventual full reliance on, an ISLC are 10 precisely the rate design that reflects the changes that have occurred in switching 11 costs over the years. 12

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Q20. WHAT ARE THE UNIVERSAL-SERVICE IMPLICATIONS OF

QWEST'S PROPOSING A PER-LINE ISLC CHARGE AS PART OF ITS

REVENUE-NEUTRAL RATE RESTRUCTURING?

17 **A20.** Universal-service objectives have been achieved for all intents and purposes for decades. Since 1970—over 30 years ago—more than 90 percent of U.S. households have been connected to the telecommunications network. In

¹² FCC, Common Carrier Bureau, "Trends in Telephone Service" (August 2001) at Table 17.5.

Nebraska, the household penetration rate exceeded 94 percent in 1983 and is 1 above 96 percent (as of July 2001). 13 The modest ISLC proposed by Qwest would 2 not at all jeopardize universal service. 3 4 IN THE LONG TERM, WHAT SHOULD BE THE POLICY OBJECTIVE 5 OF THE NEBRASKA PSC REGARDING CARRIER ACCESS AND 6 OTHER INTERCARRIER COMPENSATION? 7 8 A21. Over the long term, the Nebraska PSC's public-policy goal should be to have a single set of rates for intrastate access, interstate access, and local interconnection. 9 These rates all apply to the same function of carrying calls between the ILEC's 10 customers and other carriers. All that differs today is the price and the entities 11 12 that qualify to purchase the service. Multiple prices for the same functionality are always an open invitation to arbitrage. 13 The FCC has announced its intention to reconcile local interconnection and 14 interstate access after the current CALLS plan expires in 2005. I believe that state 15 16 regulators should be making progress in that direction, as well. 17 In particular, I believe that the Nebraska Commission should move quickly to restructure intrastate switched access charges to the interstate level and implement 18 a ISLC of approximately \$1.25 as proposed by Qwest. The two sets of access 19

¹³ FCC, Wireline Competition Bureau, "Trends in Telephone Service" (May 2002) at Table 17.2.

charges will then be in harmony (and not susceptible to arbitrage between them) 1 through 2005. Mirroring interstate access charges will be a constructive step, 2 irrespective of what the FCC decides with respect to intercarrier compensation for 3 local calls. 4 5 In the intermediate term, Qwest's proposal to recover implicit subsidies from an ISLC rather than the NUSF is an important and vital step toward economically 6 7 efficient rates. An ISLC of approximately \$5.00 per month would not jeopardize universal service in Nebraska. 8 For the long term, the FCC is contemplating adopting some form of bill-and-keep 9 for interstate access—an approach supported by Qwest. Nevertheless, the 10 Nebraska PSC need not rush to moving intrastate switched access rates to a bill-11 and-keep system until the FCC implements it. At that point, however, to delay to 12 13 implement bill-and-keep would invite further arbitrage, a return to the current situation. 14 15 V. CONCLUSION 16 DOES THIS CONCLUDE YOUR TESTIMONY? 17 Q22.

A22.

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Yes, it does.

CURRICULUM VITAE

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Received an A.B. degree from Amherst College and a Ph.D. in Economics from MIT. He has taught economics at the Stanford Graduate School of Business.

Dr. Rohlfs is a founding principal of Strategic Policy Research, Inc. ("SPR") and has been a consultant since 1983. He is an economist who specializes in the telecommunications and mass media industries. He has numerous publications, including theoretical, empirical and policy analyses.

Dr. Rohlfs has consulted on telecommunications and public policy for a variety of clients with regard to ground rules for telecommunications competition, cost estimation, interconnection pricing, regulatory reform, restructuring and privatization in many countries, and policies regarding spectrum and mobile telecommunications.

Prior to his career in consulting, Dr. Rohlfs spent 14 years at Bell Labs, rising to Department Head of Economic Modeling Research. While at Bell Labs, Dr. Rohlfs wrote a seminal paper on the theory of network externalities. This theory has been widely cited and applied to universal-service policy and technical standards. Dr. Rohlfs also wrote a seminal empirical analysis on optimal telecommunications pricing and rate rebalancing.

From 1979 to 1981, Dr. Rohlfs was Manager of Microeconomic Analysis at AT&T. He provided analytical support for AT&T's regulatory and public affairs efforts.

Dr. Rohlfs has substantial international consulting experience, including Australia, Bolivia, Canada, Cape Verde, Dominican Republic, Ecuador, European Union, Germany, Honduras, Hungary, Jamaica, Japan, Latvia, Mexico, New Zealand, Panama, Paraguay, Peru, Puerto Rico, Thailand, Venezuela and the United Kingdom.

His book, Bandwagon Effects in High-Technology Industries, published by MIT Press, was released in 2001.

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MASSACHUSETTS INSTITUTE OF TECHNOLOGY Ph.D., Economics, 1969

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1981-1983	ECONOMIC MODELING RESEARCH DEPARTMENT, BELL LABORATORIES—Murray Hill, New Jersey Department Head. Economics research.		
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Member, American Economic Association.

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TESTIMONIES

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Advisor to CONATEL (regulatory authority in Venezuela), 2000-2001.

Advisor to OSIPTEL (Peruvian telecommunications regulator), 1996-2000.

Advisor to Office of Utilities Regulation ("OUR"), Jamaica, W.I., on establishing a regulatory framework for the telecommunications sector, 1996-2001.

Advisor to Comisión Nacional de Telecomunicaciones—CONATEL (regulatory authority in Paraguay), 1999-2000.

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Advisor to Comisión Nacional de Telecomunicaciones—CONATEL (regulatory authority in Honduras), on drafting service-specific regulations for telecommunications services, 1998.

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Advisor to *Secretaria de Comunicaciones y Transportes* (Mexican telecommunications regulator) under the auspices of the World Bank and Inter-American Development Bank, 1989-1990.

Advisor to the New Zealand Treasury and Ministry of Commerce with regard to the privatization of Telecom New Zealand, 1989.

NEBRASKA UNIVERSAL SERVICE FUND QWEST AMENDED TRANSITION PLAN DOCKET NO. C-1628

June 7, 2002

OVERVIEW

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NEBRASKA UNIVERSAL SERVICE FUND QWEST TRANSITION PLAN DOCKET NO.-C-1628

Qwest continues to implement its transition plan for switched access services, rate of return, and basic exchange services in compliance with the Nebraska Public Service Commission's findings and conclusions in application C-1628, Progression Order #9, for May 12, 2000. In this year's (2002) transition plan, Qwest proposes to implement a switched access rate reduction that will bring these rate elements in line with current FCC access rates.

I. SWITCHED ACCESS

In support of the Commission's overall objectives and direction in this docket, Qwest has removed the clearly identifiable subsidies that had in the past been collected through switched access charges. Implicit subsidy removal included eliminating the carrier common line (CCL) charge. The order, which was to be completed in three phases, required Qwest to implement an intrastate access charge structure similar to the interstate access charge structure. In addition, Qwest was required to bifurcate the local switching rate element. The new rate structure for local switching would consist of a per call set-up element and a per minute charge element.

In phase one implemented September 1999, Qwest eliminated the carrier common line price element from its switched access structure, consequently eliminating implicit subsidies from switched access revenues. Qwest also implemented four new transport elements that were adopted by the Federal Communications Commission (FCC) in its 1996 Access Reform Order. The price elements were Tandem Trunk Port, Common Transport Multiplexing, End Office Shared Port, and End Office Dedicated Trunk Port. The Local Transport Restructure (LTR) which changed the transport charges from a uniform per minute-of-use charge for all types of transport to separate charges for different types of transport was implemented prior to receipt of the order in March 1999.

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Local Switching

Following the Commission's C-1628/NUSF Progression Order #11, entered September 12, 2000, Qwest will not bifurcate the intrastate local switching rate element at this time. This progression order eliminated the requirement for non-rural ILEC's to bifurcate the local switching rate elements.

Switched Access to FCC rates

This year's transition plan proposes to reduce the Nebraska intrastate switched access rates to the current FCC rate levels. The calculated revenue decline due to these rate changes based on 2001 demand amounts will be approximately \$6.1M total. Of this total, local switching rate elements will be reduced by approximately \$4.1M and local transport rate elements will be reduced by approximately \$2.0M. See the attached "Nebraska - Switched Access @ FCC Rates" spreadsheet.

Conclusion

In the Transition Plan filed April 30, 2002, Qwest proposed to further restructure switched access by reducing intrastate switched access an additional \$6.1M on a revenue neutral basis through a proportionate offset from the NUSF. After much thought and consideration of the current stage of the this docket, continued evolution of the industry since the inception of the docket, development of competition, and action by the FCC, Qwest made the decision to modify its Transition Plan to include a restructure mechanism that is more economically sound on a long-term basis. To that end, Qwest proposes reducing intrastate switched access on a revenue neutral basis to the current federal levels, but with an offset through an intrastate subscriber line charge (ISLC), rather than through the NUSF. Further, Qwest proposes transitioning the portion of its current NUSF draw that resulted from previous switched access reductions to the ISLC.

II. RATE OF RETURN

Eligible Support

During the transition period, Qwest's NUSF explicit support will equal the implicit support it has removed through reductions in access charges less the implicit support

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received from the federal fund to expressly offset intrastate implicit support (PSC order, 1/13/99, page 9). Explicit support is adjusted for a rate of return test on supported services on the NUSF-EARN worksheet that is submitted annually to the NUSF Plan Administrator.

The Formula

Transition Eligible Support	
Implicit support removed	+CCL Access Changes
less federal USF support	- Federal USF Support
less rate of return adjustment for supported services	- ROR adjustment if > 12%
return greater than 12%	•

NUSF-EARN Calculation

During the fourth year of the transition period, Qwest continues to use the most recent previous three calendar years in determining the rate of return. For the 2002 filing, the rate of return calculation uses 1999, 2000, and 2001 calendar years. All calculations are updated by dropping the oldest year and adding the newest year in order to arrive at an updated 3-year average.

Attached is the 2002 NUSF-EARN worksheet. The NUSF-EARN worksheet utilizes data from Qwest's Form M (ARMIS) filing. The state level detail is from ARMIS Report 43-01 - Table 1 Column g (FCC). Qwest continues to provide the ARMIS 43-01 Report as part of its annual report to the PSC.

"Excluded Services" contains revenue and cost data that are not residential, business, and network access products, which are the supported services as defined in the Commission Order. Qwest continues to use the Cost Accounting Allocation System (CAAS) in determining cost detail for the included and excluded services. CAAS is fully documented cost accounting system, which utilizes methodologies that assign revenue, expenses, taxes, and investments to certain service offerings. The Accounting Segregation Manual detailed for CAAS is updated annually and describes the assignment methodology, which reflects the use of cost causation principles and equitable assignment techniques.

The NUSF-EARN worksheet is populated with the appropriate Form M (ARMIS) and CAAS data in order to arrive at the "Earnings Adjustment" figure (NUSF-EARN Line 33). If the rate of return for supported services is less than 12%, the actual NUSF support that Qwest receives from the fund will be equal to its total eligible support. If the rate of return for these supported services is greater than 12%, the NUSF-EARN worksheet will calculate the earnings adjustment necessary to reduce Qwest's NUSF support from the fund. The completed NUSF-EARN worksheet is being provided both on paper and electronic file via Lotus123 format to the NUSF Administrator as part of this Transition package update.

III. BASIC EXCHANGE SERVICES

Qwest has decreased a large portion of the implicit subsidy contained in Qwest's business basic exchange service rates over the last two years. On September 1, 2000, the flat

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businesses line rate was decreased by \$4.71 lowering the rate from \$37.55 to \$32.84. On September 1, 2001, this same flat business line rate was decreased another \$4.94, lowering the rate from \$32.84 to \$27.90. This \$27.90 flat business line rate is now very close to the current target rate of \$27.50. These business rate decreases equaled \$6.406M in the first year and \$6.412M in the second year for a cumulative total amount of \$12.818M. These decreases are now reflected in Qwest's current explicit NUSF support. There are no plans to make any additional business rate changes in this fourth transition year period.

IV. <u>INDEPENDENT OUTSIDE AUDIT</u>

Following the audit requirements in NUSF-1 Progression Order No. 5, NUSF-1 Progression Order No. 7, and NUSF-4 Progression Order #4, Qwest engaged Arthur Andersen LLP to audit the worksheets and forms filed with the NUSF Administrator for the year ending December 31, 2000. These audit results were completed and submitted to the NUSF Administrator on August 28, 2001.

Qwest currently has a proposal before the Commission that we perform this audit once per three-year period. This issue has been addressed by the Commission in NUSF-1 Progression Order No. 5, Paragraph 19 which states "In the event an ILEC does not perform an annual audit, the Commission requires said ILEC to perform a NUSF third party audit once per three-year period." Qwest does not typically perform this type of audit every year, and we wait for a ruling on this issue. After this ruling is received we will perform any audit as required by the Commission.

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V. TRANSITIONING AWAY FROM NUSF SUPPORT FOR THE OFFSET OF INTRASTATE SWITCHED ACCESS REDUCTIONS

Since the inception of the NUSF following the January 1999 order in C-1628, Qwest has voluntarily eliminated the switched access carrier common line charge (CCLC), has twice reduced the monthly business rate, and now is planning an additional reduction so intrastate switched access. With the 2002 switched access rate decrease, Qwest will be at parity with the interstate rates. Just as for each of the prior rate decreases, Qwest expects the PSC to maintain revenue neutrality for this reduction, but this time through a different, more economically rational mechanism for the long run.

Even though Qwest has removed the clearly identifiable subsidies that had previously been collected through intrastate switched access charges, Qwest believes that further reductions in intrastate switched access rates are necessary. This is in order to further the Commission's stated goal of moving the state switched access charge structure more closely toward the interstate switched access structure and to further the overall policy goal of establishing appropriate economic pricing.

As the Commission moves further toward a more permanent NUSF plan, the timing is right for Qwest to address what it believes to be the most appropriate way to accomplish switched access restructuring. Revenue neutrality is more appropriately accomplished through implementation of an ISLC, rather through a NUSF draw, especially when all clearly determinable subsidies have been removed. The ISLC is a flat rate charge attributed to the customer, who is the user of the loop.

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VI. REVENUE NEUTRALITY

For reference, the following is a summary of the revenue neutral rate reductions during the NUSF transition plan:

Date		Annual Revenue Effect
9/1/1999	Eliminated the CCLC rate	\$20.4M
9/1/2000	Reduced the flat business line rate \$4.71 to \$32.84	\$6.4M
9/1/2001	Reduced the flat business line rate \$4.94 to \$27.90	\$6.4M